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ABSTRACT

This monograph presents a digest and brief analysis of a 700-page congressional committee print entitled "Needs of Elementary and Secondary Education in the 1980's", issued in January, 1980, by the House Committee on Education and Labor. The major ideas of the 54 articles in the committee print are condensed, with additional attention given to the implications for trends in teacher education. The articles are grouped under three headings: the setting for educational decisions in the 1980s; challenges facing the education professions in the 1980s; and recommendations for action at the federal level. The format is a discussion and comparison of major educational themes, with extensive quotes from the articles. Among the challenges cited by the authors are the status of the curriculum, participation in decision making, special education areas, evaluation and research, and professional involvement. The implications for pedagogical education in the 1980s are brought together and analyzed in the last section. The ERIC Resources in Education (RIE) abstracts of the articles are appended. (FG)

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Projected Trends in Education in the 1980s

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by Alice Miel

ERIC

PROJECTED TRENDS IN EDUCATION IN THE 1980s

by

Alice Miel

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CONTENTS

FOREWORD v

PREFACE vii

PART ONE: SETTING FOR EDUCATIONAL DECISIONS IN THE 1980s 1

Waning of Public Confidence in the Schools. 1
Demands for Tightening Up 2
Overlooked Accomplishments of the Public Schools 4
Demographic Trends 7
Financial Crunch 14
Lack of Unified Direction 16
At Issue: The Survival of the Public School 18
Grounds for Optimism 21
Conclusion 27

PART TWO: CHALLENGES FACING THE EDUCATION PROFESSION IN THE 1980s 29

Participation in Decision Making 29
  Locus of Control 30
  Participation at the Local Level 31
The Future and the Curriculum 34
The Real Basics for the 1980s 43
Balance and Fairness in the Curriculum 45
  Provision for Balance 45
  Provision for Fairness 51
Environments Conducive to Learning 54
  Psychological Aspects 55
  Physical Aspects 57
  Resources in the Community at Large 60
  Mass Media in the Environment 63
  Uses of Technology 66
Areas Needing Special Attention 72
  Education of American Indians 72
  Education of Migrant Children 74
  Education in Rural Communities 76
  Schooling for Young Adolescents 80
Education of the Gifted and Talented 82
Education as a Lifelong Process 83
Education and Work 86
Evaluation and Research 91
  Evaluation in Education 91
  Educational Research 94
Education of Professionals 98

Calls to Action by the Profession 102
Conclusion 105

PART THREE: RECOMMENDATIONS FOR ACTION AT THE FEDERAL LEVEL 108

Recommendations for Congressional Action 108
   Overall Role of the Congress 108
   Educational Civil Rights 109
   Vocational Education 111
   Personnel Training 111
   Support of Research 112
   Funding Practices 114
Advice to Department of Education 115
Conclusion 118

PART FOUR: PEDAGOGICAL EDUCATION IN THE 1980s 120

APPENDIX A: COMMITTEE PRINT TABLE OF CONTENTS 123

APPENDIX B: ABSTRACTS OF COMMITTEE PRINT ARTICLES 127
(alphabetical by author)

FOREWORD

What's ahead for education during the decade of the '80s? Futurists, professional educators, and armchair theorists alike have made their independent predictions, but nowhere in the literature has the answer to that question been treated more comprehensively than in Needs of Elementary and Secondary Education in the 1980's: A Compendium of Policy Papers, published in January 1980 by the U.S. House Subcommittee on Elementary, Secondary, and Vocational Education.

Projected Trends in Education in the 1980s, published by the ERIC Clearinghouse on Teacher Education, is a synthesis and analysis of the 54 articles in the original 700-page Compendium. This ERIC monograph, we believe, is significant for several reasons: Its content draws from the writings of 54 key education professionals across the nation. It makes available in a much condensed format the ideas included in the original work, which is now out of print in hard copy.* It discusses the implications for teacher education, an area not directly considered in the Compendium.

We also believe that it is a significant publication because of its author, Dr. Alice Miel, professor emeritus of Teachers College, Columbia University. Dr. Miel, a scholar of repute in the field of education, brought a wealth of experience to the awesome task of synthesizing the Compendium. In conceptualizing the outline of the monograph, Dr. Miel was assisted by her colleague and friend, Dr. Margaret Lindsey, also professor emeritus of Teachers College.

We express our appreciation to Dr. Miel for her contribution to the educational literature, to Dr. Lindsey for her assistance, and to the Clearinghouse staff, particularly Sharon G. Boardman, editor, and Stephen Seitz, editorial assistant, for seeing the manuscript through to publication.

KARL MASSANARI
Director, ERIC Clearinghouse
on Teacher Education

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*Microfiche copies of the original Committee Print are available from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, VA 22210. Order number ED 185 660. Also, see Appendix B.

PREFACE

This monograph presents a digest and brief analysis of a 700-page "Committee Print" issued in January 1980 by the Committee on Education and Labor of the United States House of Representatives. This book, entitled Needs of Elementary and Secondary Education in the 1980's, is a compendium of 54 policy papers written for the Subcommittee on Elementary, Secondary, and Vocational Education on the invitation of Chairman Carl D. Perkins. According to Congressman Perkins, the volume was compiled "as a way of gathering background information for future decisions about legislation and educational policy." The effort was seen also "as a way of fulfilling the Subcommittee's responsibility for 'foresight' activities, undertaking futures research and forecasting in areas within its jurisdiction." It was hoped that, in addition, the papers would be useful to educators around the country.

To encourage diversity and creativity, the choice of topic was left to each author. This decision resulted in surprisingly broad coverage of the field of education, although one misses attention to the pressing matter of education for a global perspective. Passing over education of the handicapped with mere mention in most cases suggests that this area is not considered to be in great need of increased support at this time. Repeated references in different articles to the same themes serve to point up priority items in the 1980s. Examples are the precarious state of public education, uncertainty about the future of the world, shifts in size and composition of the school population in various communities lending support to arguments for more control over educational decisions at the local level, and changes in patterns of work and leisure reinforcing the need to treat education as a lifelong process.

The arrangement of the articles in the Committee's compendium was the work of K. Forbis Jordan and Dennis Little of the Library of Congress. They set up three categories for grouping the material: leadership and governance, social change and demographics, and knowledge, technology and the curriculum.

The authors and their affiliations are listed in Appendix A, which is a reprint of the original Compendium table of contents. An abstract of each paper in the Committee Print can be found in Appendix B. Authors for the articles were selected to secure diversity and balance among theoreticians and practitioners. The result was that 22 of the 54 papers were written by university professors or administrators, while one came from a citizen group, one from a public library, and nine from local school systems, some public, some private. Authors of four papers were located in Federal and two in state agencies, nine were working in professional associations, and six in other types of organizations.

In requesting preparation of this monograph, the ERIC Clearinghouse on Teacher Education had in mind two purposes. The first was to make available to a wider audience, in condensed form and with some analysis, the major ideas to be found in the Committee Print, for this work had been published in a limited edition. The second was to point out implications for teacher education (considered broadly as the preservice and inservice preparation of professional educators) in this decade. This dimension is given little attention in the original document. The audience was seen as educators in various roles, lay persons with concern for education, the new Department of Education, and the Congress itself.

The articles in the Committee Print are so broad in scope that they usually spill into several categories. Therefore, it seemed best in preparing the monograph to set up a new system of organizing the content. After much study, it was decided to group the authors' ideas under three headings: the setting for educational decisions in the 1980s, challenges facing the education profession in the 1980s, and recommendations for action at the Federal level. Part four, pedagogical education for the 1980s, was added to provide a place for examining implications of the entire monograph for the education of all types of professionals engaged in education. Categories for breaking down the material were then determined as the articles were "mined" for pertinent ideas. The preparation of the new outline became an important step in analyzing the contents of the original publication.

To reduce a volume of 700 pages to a monograph less than one-quarter its size meant ruthless selection among and within articles. In some cases it seemed advisable to reproduce lengthy segments so that the development of the author's argument might be preserved. There was an attempt to represent in the monograph all the major ideas in the Committee Print. The writer bears full responsibility for all such decisions.

As the articles were being condensed, care was taken to reflect faithfully the ideas of the author. Words of authors are sometimes paraphrased but more often quoted directly. The original article may be consulted to determine the context of selections. Page references correspond to the pages in the Committee Print, and references cited by the authors are listed at the ends of the chapters in which they appear.

No digest can do justice to the original pieces, each with its own integrity. However, it is hoped that the monograph will not only have worth in its own right, but also will send the reader after further useful ideas expressed by the authors in their own idiosyncratic ways.

I wish to acknowledge the able assistance of Professor Margaret Lindsey in preparing this monograph. Her ideas were especially helpful in developing implications for the broad field of pedagogical education.

ALICE MIEL
Gainesville, Florida

PART ONE

SETTING FOR EDUCATIONAL DECISIONS IN THE 1980s

Educators in the eighties are heirs to the trends of the seventies, some of which are troublesome, some encouraging. In this part of the monograph, the inheritance is examined as the setting for making decisions about education in this decade. First, authors commenting on the state of public confidence in the schools are cited. Next comes material analyzing demands that schools tighten up their performance, followed by attention to accomplishments of the schools that have been overlooked. Demographic trends that will have strong consequences for education are presented in detail, leading to discussion of the financial situation facing the schools. Authors also decry the lack of a unified direction for educational efforts and raise the question of the survival of the public school. Part one concludes with authors giving grounds for optimism about the future of education.

WANING OF PUBLIC CONFIDENCE IN THE SCHOOLS

One inheritance from the seventies is continued decline in public confidence in the schools. According to Warner /7 (94)/, our educational system is in a state of disarray: Public confidence is at a low ebb and even the confidence of educators is wavering. Fasenmeyer /41 (536)/ states that "symptoms of educational decay are rampant":

> The public is constantly reminded of the high dropout rate, the functional illiterates who receive high school diplomas, the number of police required to maintain security of the schools, the grade inflation, and the list goes on.

Candoli /15 (190)/ believes that the difficult and traumatic consequences of executing Federal law, i.e., equity, due process, the Brown decision, have further alienated the citizenry from the public school institution.

Kiernan /11 (145)/ shows that the educational establishment is not alone in suffering a credibility gap:

> A recently completed survey probed the public confidence quotient of the scientific community, medicine, religion, the military, business, TV and the press, our Congress, organized labor, the Federal government including the Executive branch, and several other institutions.... The time frame included the years 1973 through 1978. Education dropped to its lowest rating ever, from 49 to 28.4 percent. If it is of any solace only the scientific community and medicine rated slightly higher in the opinion of our citizenry. The others, even including the U.S. Supreme Court (28 percent), dropped substantially with the press at 20, Congress at 12.9, and labor bringing up the rear with 11 percent.

The decline in public confidence in their schools is directly related to the financial crunch treated later in this part of the monograph and to demands that the schools give evidence of developing competence, especially in basic skills.

DEMANDS FOR TIGHTENING UP

No matter how other institutions fare in maintaining public trust, educators must deal with particular demands of their clients. A prominent demand in the seventies was "back-to-basics," which has been linked with two other powerful slogans, "accountability" and "minimum competence." This combination, says Dede /3 (32)/, leads to educational conservatism.

A reference by Goodman /36 (475)/ to changes in school texts serves as a good illustration of this trend:

> School texts have deteriorated badly in quality and utility as a result of the back-to-basics movement. A good deal of the progress made in past decades to make texts more usable, interesting, and more relevant to learners has been reversed. Recent texts are overlaid with sterile management systems keyed to narrowly viewed skill sequences. Publishers advertise how old-fashioned the ideas in their texts are.

Stake /13 (167)/ says that many people think relief from poor performance lies in the direction of uniform standards and development of minimum competence, but he goes on to show that such is not the case:

> What happens when a district decides to impose uniform standards and minimum performance requirements? Educators and laymen try to identify some most basic and critical learnings. They agree on a few things, usually so general that no curricular arguments are raised. They develop a small number of test items having face validity for representing the critical

> learnings. No one supposes that these items stand for an education, or for even some abstract minimum expectation, but only that the test score would correlate positively. If a lot of fuss is made about student performance on the tests, then the teachers emphasize those particular lessons which are most likely to produce good test scores.... departing sometimes from what they think is the best instruction to satisfy the present demands. It is no surprise to anyone that there is not a great correspondence between what is emphasized in preparing students for the test and what is considered vital understanding for educated human beings. The tests orient to the simplest of skills, even trivial learnings.

Farr /8 (109)/ notes the connection between back-to-basics, accountability, and minimum competence testing and comments on where it leads:

> Since the "back-to-basics" movement is often articulated in factored skills that can be defined for accountability, its proponents welcome competency exams that tend to reflect this emphasis. Thus both trends can reinforce each other and promote the development of lower level thinking skills at the expense of the higher level skills measured on college entrance exams. This is ironic, for it is the score declines on such tests that proponents of minimum competency and "back-to-basics" have adopted as their prime rationale.
>
> Many proponents of the "back-to-basics" movement boldly admit that they endorse rigidly controlled content in order to guarantee the teaching of values they believe are basic, traditional, and valid.... the control of content to instill approved value systems will open the door to indoctrination by any ideologists who gain control of the approval procedure. This potential of the "back-to-basics" movement to limit the content of curricula links it to trends that would strip our comprehensive educational system of funds and would promote an elitist system where parents could reward an indoctrinating curriculum with public money.

Wigginton /34 (437)/ defends academic rigor but questions the way some schools try to achieve it:

> Demanding academic rigor is justifiable, but reaching for it through numerous new kits and packages and drills and tests usually defeats the purpose, creating, instead, students who respond more quickly to certain stimuli, like Pavlov's dogs, but know not a whit more about the world outside the school, the use of the skills within it, or learning as an independent and life-long passion. What we too often get for our money is a better class of robots.

Educators have been commanded to be accountable for the minimum competency of students by teaching and testing for "the basics." In a later section of the monograph the question of what is truly basic for living in the '80s and '90s is addressed. The matter of adequate evaluation of results is also treated in more detail in part two.

OVERLOOKED ACCOMPLISHMENTS OF THE PUBLIC SCHOOLS

In the face of widespread despair over the supposed low level of education in the United States, it is useful to set the record straight on what our maligned schools have actually achieved. Authors quoted present facts that at least moderate the picture.

Howe /5 (58)/ believes that we have come a long way toward achieving "an educational system that has both excellence and equality as its major characteristics." He writes:

> Today we too easily forget that each succeeding generation of Americans has been more literate than its predecessor; and in our enthusiasm for repairing evident shortcomings in the schools, we forget also their great achievements in providing this society with an educated citizenry.

The National Committee for Citizens in Education /12 (152)/ quotes specific figures from Tyler that support Howe's statement:

> At the time of the signing of the Declaration of Independence, only 15 percent of our adult population was literate. By World War I, that percentage had risen to 35 percent; and by World War II, to 55 percent. In 1979, 80-82 percent of the 17-year-olds who took the National Assessment of Educational Progress had attained basic literacy.

Tyler /6 (79)/ cites further facts in his own article:

> In the International Evaluation of Educational Achievement, the average test score in reading comprehension of American 14-year-old children was exceeded only by those of Finland and New Zealand, small countries with a relatively homogeneous population. The problems of student learning in reading and arithmetic are serious only with a small fraction of American children, mostly those who are economically and socially disadvantaged. Where American students are more widely lacking is in civic education.

Farr /8 (103-05)/ throws additional light on accomplishments of our public schools in a section entitled, "Acknowledging the Progress We Have Made":

> ...In a powerful argument for what our schools have accomplished, Harold Hodgkinson (1979) writes that in the past 30 years, we have done for over 75 percent of our students in elementary and secondary grades what we expected to do for a fourth of them in 1950--get them prepared for the higher education they seek. He points out that this has drastically broadened the group of students taking college entrance exams and that although we might have expected a very dramatic drop in the scores on such exams, the scores have actually fallen off by only a few questions.
>
> Although Hodgkinson's point is an effective response to critics who cite declines on college entrance exams as an argument that our schools have failed, it does not point out that our comprehensive, public schools have been intended to serve the non-college-bound student as well.... Virginia Sparling, president of the national PTA, recently acknowledged that "U.S. schools educate more people to a higher level than any other nation..." ("Kids, Teachers" 1979).
>
> Our intense concern over education in the U.S. has, when coupled with its democratizing purpose, guided our comprehensive system to the position of world leadership that Sparling noted. That success has led other nations to turn to it as a model.
>
> ...nations such as Sweden and Great Britain, which see the best students in the U.S. performing at least on a par with their own...note the rest of our citizenship being better prepared for the technological age by our comprehensive schools than their citizens are prepared by their elitist, separatist educational systems. Their observation is verified, for example, by the number of U.S. citizens who have won Nobel Prizes in science the past 20 years. Seventy-three have gone to Americans. The country that is closest to that distinction is Great Britain with 22.

Farr /8 (110-12)/ goes on to examine the ways in which test data have been applied to evaluation of schools:

> The flagrant misuse of these data in the national evaluation of our schools has been fraught with the following illogical and unscientific practices:
>
> a. Declines on some measures have dominated the rationale for drastic educational change whereas score comparisons from other tests which show no decline have been relatively ignored. There has, for example, been agonizing over score declines on college entrance exams, such as the Scholastic

> Aptitude Test (SAT); yet, the fact that students have held their own on a battery of achievement tests designed by the same agency that produces the SAT has gone virtually unnoticed.
>
> b. Score comparisons from other studies demonstrate pupil improvement mixed with very slight declines--depending on age levels and the skill or subskill measured. These include the most carefully conducted achievement comparisons we have; yet the encouraging results of our National Assessment of Educational Progress in reading, for example, have had very limited dissemination and exposure, as have other encouraging studies.
>
> c. By ignoring some of the better data, the critical analyst often mixes and combines data in totally unacceptable ways. Aptitude scores (SAT) are combined with or accepted as achievement scores; scores from one test are compared with those from another which measures subskills with a totally different emphasis; scores from one population are compared to scores of a population from a significantly different socioeconomic environment; scores for age levels are compared to those for grade levels; comparisons are made with no consideration of changes in vital factors such as age differences, dropout rates, socioeconomic shifts, etc.; declines on math scores are lumped with reading scores; etc. Dependable product comparisons using student achievement scores are extremely difficult to obtain. We do not now have data that is even close to adequate to support or condemn our educational system or to reliably dictate sweeping educational changes; but a mega-analysis of the best we do have gives mixed indications at worst.
>
> d. The use of SAT score declines to promote minimum competency and emphasis of the "basics" is, as noted above, ironic. The test measures a very high level of literacy; it does not measure minimum competency in basic skills.... To use it to attack education across the board is an outrage we have somehow overlooked. I believe that a large share of the responsibility for an emphasis on carelessly interpreted data lies with the media....
>
> The repetitive printing and airing of attacks on our schools has convinced the public that there are severe crises in education. Yet we simply do not have adequate data to support that alarm....

The authors cited in this section believe that the long-range picture of American public education is one of splendid accomplishment despite misrepresentation of results. Further discussion of faulty evaluation procedures used in judging the public schools is to be found in part two.

DEMOGRAPHIC TRENDS

An important part of the setting in which educational decisions must be made in this decade are trends in such vital and social statistics as birth, death, and marriage, and the size, density, distribution, and mobility of our population, to use a definition of demography by Little /27 (340)/. This writer gives a brief, stunning overview of such trends:

> For approximately the last five to twenty-five years, our nation has experienced significant changes in various demographic patterns which have or will raise significant educational policy issues for the 1980s. These include a declining birth rate and an aging population; regional shifts from the "Snow Belt" to the "Sun Belt" as well as a return to rural America; a dramatic increase in female labor force participation rates; a general change in family structure--"kids with kids," single-parent families, unmarried couples, etc.; and changes in the racial and ethnic composition....

Benson and Hoachlander /10 (135)/ have something special to say on demographics relating to urban districts:

> ...some cities appear to be enjoying a renaissance of social and economic activity. Boston, Washington, Denver, and San Francisco, to name a few, all report a return of middle class families to some urban neighborhoods. Though dominated by young professional couples who do not yet have school-aged children, there is reason to expect that many intend to stay.... these young couples are of a generation that grew up in suburbia and found it wanting. For them, the city is a more intellectually and culturally stimulating place to live than suburbia, and if some of the major problems of urban life can be overcome, they plan to stay.
>
> One of those major problems is schools, and unfortunately the presence of a growing urban middle class is not likely to bode well for the public schools, at least for the next decade. For one thing, their numbers, while growing, are still small. For another, they are mostly white, and despite growing up in a time of significant progress toward racial equality, many harbor lingering fears of schools and neighborhoods where minorities are the majority. In New York, Washington, D.C., Cleveland, Chicago, Atlanta, Los Angeles, Philadelphia, St. Louis, and a number of other cities, minorities comprise over 80 percent of public school students. Consequently, concerns over racial imbalance, as well as the quality of the local school program diminished by fiscal problems, make private alternatives very attractive to these new urban families.

As for the suburbs, Hays /28 (346)/ comments:

> Much has been said about the plight of the urban area and of the "white flight" to the suburbs, but little has been said about the impact of changing demographics on the suburbs and the schools they spawned. Declining enrollments, a changing student population, different values and cultures, and the lack of some stability is causing turmoil in the schools of the suburbs. We are in a period of traumatic transition.

Wegmann /23 (278-83)/ offers a detailed analysis of demographic trends in relation to each level of public education:

> Preschool and Elementary Enrollment. The total number of children of school age in the 1980s will be primarily a function of two factors: the cohort of women of childbearing age (increasing rapidly as the "baby boom" children come of age) and the number of children born per woman of childbearing age (which is now 1.8 births per woman, an historic low)....
>
> In projecting preschool enrollment we have the added problem that, since attendance is not compulsory, the proportion of the age group attending is also uncertain. The preschool enrollment trend of the last decade is clearly up. In 1966, 19 percent of children 3-5 years of age were enrolled in preprimary programs.... The most recent figure, for 1977, is 49.5 percent. Whether this upward trend will continue to increase so quickly is uncertain, but with the increasing numbers of working mothers, it seems unlikely that it will decrease significantly.
>
> Preprimary enrollment, and any educational benefits this experience provides toward later success in elementary school, is clearly a function of family income. The proportion of children aged 3-5 who are enrolled in preprimary programs rises steadily from approximately 43 percent of those homes with family incomes under $10,000 to 78 percent of the children from families with incomes of $50,000 or more. To the extent that students with preprimary education have an advantage over those who do not, this is a significant equity issue.
>
> Turning to enrollment figures for public elementary schools, we find that enrollment peaked in 1971 at 27.7 million. An enrollment of 24.2 million is projected for the fall of 1979, and a further drop to 23.6 million in 1983. From then on, enrollment may begin to rise slightly again.... The Census Bureau projected that the total population of 5-13 year olds will rise from a low of 29.1 million in 1985 to 32.6 million in 1990. Of course, should the birth rate rise, enrollment could be substantially higher.

It is important to note that, just at the point that the number of children aged 5-13 begins to rise in the mid-80s, the number of potential new teachers turning 22 years of age begins to decline. At the same time, the proportion of college entrants aspiring to a career in teaching has shrunk every year since the beginning of the teacher surplus (dropping from 22.1 percent in 1969 to 6.5 percent in 1975). As a result of these factors, there is at least the potential for a shortage of elementary teachers in the late 1980s. A contributing factor is that, in 1971, 22 percent of all teachers were 50 or older. Hence, by the mid-80s significant numbers of teachers will be retiring. Somewhat offsetting this need for more new teachers is the large number of college graduates of previous years who have teaching credentials but who were unable to get teaching positions. Many left teaching for other professions or for child-rearing. One large unknown will be how many of these persons can be attracted back to the profession if a shortage of elementary teachers develops.

Secondary Enrollment. If the future pattern of elementary enrollment presents a mixed picture, that for secondary education is much clearer. The Census Bureau projects that the number of 14-17 year olds will fall from 15.8 million in 1980 to 14.4 million in 1985 to 12.8 million by 1990. Only in 1991 will a slight increase begin. Thus, high school enrollment can be expected to fall throughout the 1980s. Not all of these 14-17 year olds, of course, are in school.

The National Center for Educational Statistics reports that enrollment in grades 9-12 in public schools peaked in 1976 at 14.3 million. It is projected to fall to 12.7 million by 1981, continuing down to 11.8 million in 1986. As a result, the job possibilities for new high school teachers would seem to be quite bleak, and high school administrators can expect to face the multiple personnel, curricular and budgetary problems of declining enrollment throughout the decade.

Enrollment Variations. In considering the impact of these variations in elementary and secondary enrollment, it is important to note that there will very likely be significant differences in what happens in various parts of the country....

The problems of rapid growth could be particularly acute in certain areas of Colorado, Montana, North Dakota and Wyoming if these develop into significant sources of coal, synthetic petroleum, or natural gas. These new industries may attract large numbers of workers who settle in "boom towns" in various parts of these states. Historically, those moving to such areas have disproportionately been young adults with children. This could contribute to the depopulation of some school districts and the need to expand others rapidly. One key question facing many high school teachers particularly will be their willingness to relocate if they wish to remain active in the profession.

The Large City School Districts. There is every indication that the problems faced by central city school districts in major metropolitan areas may intensify over the coming decade. The pattern of migration in and out of metropolitan areas is having the net effect of increasingly concentrating minority students in the cities and non-minority students outside of them. This process has been going on for some time. The year 1964 was a milestone: for the first time, the number of citizens in metropolitan suburbs surpassed the number in central cities. Today, almost 60 percent of those living in metropolitan areas live in the suburbs. Many suburbs have now surpassed their central cities in the provision of jobs. While it is possible that energy problems may cause some population movement back to the city, it is also possible that the movement of jobs out to the suburbs could be accelerated. In addition, should the government invest heavily in inexpensive, rapid mass transit between city and suburb, this movement of white families with young children to the suburbs could actually be accelerated.

As the racial mix in the center city schools has been changing, so has the family status of all American students. Between 1970 and 1977, the population of children under 18 living with both parents went from 89 percent to 85 percent for whites, and from 58 percent to 47 percent for blacks. At the same time, the labor force participation rate for women has grown from 37 percent in 1962 to 48 percent in 1977, and is projected to grow to the 60-70 percent range by 1990....

Central city school districts face the prospect of a declining total number of students and an increasing proportion of nonwhite students, many of whom are low income, have working mothers and/or do not come from intact, two-parent families. The problems of providing a quality education under such conditions of racial and socioeconomic isolation may become even more severe than they are now. This is particularly true because these districts may experience serious financial problems as a smaller and smaller portion of the voting population has children in the schools, on the one hand, and as an aging teacher force at the top of the pay scale utilizes militant teacher unions to keep pace with inflation on the other. With the Supreme Court disinclined to order school integration across district lines, and increasing energy costs making transportation to reduce racial isolation more and more expensive, the problem of providing high quality educational experiences to large and increasing proportions of students from low-income and minority families will be a central educational dilemma of the 1980s and beyond.

This situation may be further complicated by large numbers of non-English speaking Asian and Hispanic immigrants, legal and illegal. Indeed, if their numbers continue to increase rapidly, the central city public schools may experience an Americanization challenge and mission not unlike that of the 1890s.

Colleges and Universities. Predictions of college and university enrollment are complicated by a number of variables not found in considering elementary and secondary enrollment. College attendance is not mandatory, and there have recently been significant swings in the proportion who choose to go on to higher education. Many students attend colleges and universities at some distance from their homes, so that attendance cannot easily be predicted from local population figures. Students who do not go to college after high school may at any later time choose to enroll, either on a full- or part-time basis, as a great many in fact are doing. In 1976, for example, 22 percent of college freshmen had waited from one to three years after high school graduation before enrolling. Colleges and universities, unlike public elementary and secondary schools, are not tuition-free, so that costs can be a major factor in both the decision to attend or not attend and the choice of institution.

Accepting these uncertainties as given, the basic fact is that between 1980 and 1990, the 18-21 year old cohort will lose over 2.6 million persons, a decline of 15 percent. Since, in 1975, 48 percent of the total enrollment in higher education came from this group (as did 64 percent of the full-time undergraduate enrollment), this is bound to affect college and university attendance.

At the same time, the proportion of the 18-24 year old cohort who are minorities will be increasing from 15.3 percent in 1980 to 16.5 percent in 1985 to 17.9 percent in 1990. Because of the reduced number of students graduating from high school, colleges will have to compete with the military and with business...

One major unknown in the college enrollment picture is the number of foreign students seeking admission to American colleges and universities. In 1976-1977, over 200,000 foreign nonimmigrants attended American academic institutions. Most of these students are men whose majors are heavily concentrated in engineering, business management, and the sciences.... While the excess capacity that will develop in American institutions of higher education in the 1980s may seem the perfect answer to the higher

> educational needs of developing nations which cannot afford to provide expensive scientific and technical education for their populations, it is not clear that all American institutions are prepared to deal with large numbers of foreign students in a way that is mutually beneficial and satisfactory.
>
> As is true of elementary and secondary schools, there will likely be widely scattered patterns of increase and decline in college and university enrollments depending on local circumstances.... The National Center for Educational Statistics projects that, while full-time college enrollment over the 1976-1986 period will fall by 1 percent, part-time enrollment will increase by 45 percent. Enrollment in public institutions is projected to grow by 23 percent at the same time that enrollment in private schools falls by 5 percent. Although four-year institutions are expected to lose 3 percent of their enrollment over that period, two-year institutions are expected to gain 54 percent, and graduate enrollment is expected to increase by 15 percent.... Finally, much of the enrollment decrease will still be affecting colleges and universities as the decade ends. Over the 1980-1994 period, enrollment is expected to drop by 1.8 million, and the need for faculty by 100,000.
>
> All of this suggests that publicly supported institutions located in large cities, structured to accommodate part-time students easily, with healthy graduate enrollments and an environment attractive to nonwhite and foreign students, may actually experience enrollment increases. Conversely, the four-year private college located in a rural area and totally dependent on full-time boarding students may be in considerable difficulty. It is projected that many of these latter institutions will not survive, or will do so only with great difficulty.

Little /27 (335-37)/ deals with demographics showing greater racial and ethnic diversity in this country and points out the special needs of different minority groups:

> Blacks, Asians, and other racial minorities constituted 12.4 percent of the total population in 1970; 13.1 percent in 1975; and a projected 13.8 percent of the population in 1980. As a percentage of total population, nonwhites will comprise one out of seven in 1985 compared to one out of eight in 1970. However, the real shift will be seen in the school systems, where because of higher fertility rates nonwhites will make up nearly one in five of all children of grammar school age in 1985, and nearly that high of population of 15 to 19 years of age. These shifts may cause difficulties in developing a school busing program.
>
> Immigration policy may raise additional questions.

> Currently the U.S. has approximately 400,000 legal immigrants and from two to ten million illegal aliens. An exploding population in Mexico could cause a significant increase in these numbers. In addition, Congress has passed legislation allowing an additional 14,000 refugees a month from Southeast Asia. Language barriers may be just one factor. In 1976, about 28 million Americans, about one in eight, usually did not speak English at home or spoke a foreign language as a second language. The 1970 Census recorded over twice as many Japanese, Chinese, and Filipinos in America than in 1950. In 1978 there were an estimated 12 million Spanish Americans, up significantly from the first Census {Bureau} enumeration in 1970, where the estimate was 9.3 million.
>
> These trends create two groups of issues and any of these issues may well require additional expenditures. First, who is to pay for the elementary and secondary education of sons and daughters of illegal immigrants.... Dallas school officials say the cost of enrolling all the children could range from 6.7 million to 11.7 million dollars....
>
> The second main issue centers on the Asiatic refugees. Some states are experiencing extremely large numbers of Asiatic refugees. California expects refugee numbers in the state to reach 200,000 by 1982. Many of these refugees are poor and illiterate with no skills to assimilate them into the workforce. However, their most immediate problem seems to be health. In a San Francisco study, 70 percent carried intestinal parasites, some communicable through poor hygiene; 40 percent showed positive reaction to tuberculosis tests; and ten percent suffered from infectious skin ailments. Is a special health screening program required for the children of these refugees? How often must it be repeated, if at all? Will additional screenings be required for their classmates? If so, how will these screenings be financed?

Changes occurring in the population of the United States of America present decision makers in education with a plethora of knotty problems, ranging from a downturn in numbers of clients to be served to language barriers and poor health. Education for a multicultural and multilingual population is discussed later in the monograph.

FINANCIAL CRUNCH

It is not difficult to see a connection between demographics and the financial situation of the public schools as this decade opens. Dede /3 (33-4)/ explains that "formal education will experience very severe financial strains in the next decade because of the simultaneous impact of a number of trends":

> First, we seem to be approaching the maximum percentage of their income that people are willing to spend for education (currently 8 1/2 - 9 percent of GNP). Over time, the "piece of the pie" that we've been able to claim from people's incomes has crept up and up and up--but now clients are saying "No more."
>
> The reason that our share of the fiscal "pie" has continuously increased has not been that we've been particularly wasteful with money, but because education is labor-intensive rather than capital-intensive (that is, we use people to produce educational outcomes instead of using machines).... Over time, capital-intensive industries cost consumers progressively less, relative to labor- intensive industries, because salaries rise faster than capital costs. (For example, from 1965 to 1975 the Consumer Price Index rose 69%; educational costs rose 155%.)...
>
> Second, even small yearly reductions in budget cumulate to an enormous drain on fiscal resources fairly quickly. Right now, inflationary losses for many educational agents are running at well over fourteen percent per year, but revenues are growing at only around 7 percent per year: at least a 7 percent net loss. In 10 years, 7 percent loss per year will leave formal education with one-half the revenues (in real terms) it now has. Further, given the general economic woes society will probably be experiencing, we can be sure that education will not have the first claim on social priorities in terms of funding--nor second, nor fifth.
>
> Third, on top of this general economic drain, education will face spiraling resource costs--not just in energy, but in such terms as water, paper, and transportation. Politics being what it is, in response to these increased costs we will see wildly changing and inconsistent policies from government. So far, the Federal response to the energy situation has been less than ideal, and in general that will continue to be true for all resource crises. Finally,...we are also confronted by demands for "higher quality" education. We're supposed to train for jobs, screen for jobs, train for further schooling, screen for further schooling, socialize, entertain and babysit, keep students off the job market, prepare for citizenship, prepare for family life, and (in the remaining time available) create happy, healthy human beings...on 7 percent per year less!

Wegmann /23 (284)/ gives figures that further explain resistance to funding public education:

> The population of persons aged 65 and over will be rising steadily during the 1980s and beyond, going from 10.7 percent of the population in 1976 to 11.2 percent in 1980 and 12.2 percent in 1990. Because many of those over 65 are living on fixed incomes and are particularly hard hit by inflation, it will be difficult for them to support heavy school expenditures. An increasing number of single persons and families without children may also be less inclined to vote for educational expenditures.

Kiernan /11 (145)/ reveals the role of Federal legislation in contributing to the financial plight of public education:

> ...the 94th Congress took a giant step forward in enacting PL 94-142 with its long-overdue mandate concerning handicapped children.... {At that time} it was assumed that the fiscal pie would be substantially increased in size to underwrite these new services. Such has not been the case and youngsters we categorize as average or normal, in addition to the gifted, are going to be the forgotten young citizens of the new decade. With an ongoing tax revolt and increasing resistance to school budget requests, mandated services such as those incorporated in the new law for the handicapped will obviously be supported. We could well be facing a financial and academic disaster, however, in attempting to support general programs for the masses from limited or depleted budgets.

The cost of providing equal access to education for all types of students calls for rethinking public school finance, according to Phillips /18 (222-23)/:

> Adequate public education finance will require improved coordination and use of local, state and Federal funds which can be targeted in a manner that is responsive to the educational needs of students.... Examples are exceptional children's programs, programs for the disadvantaged, bilingual studies, and technical and vocational programs. If these programs are to provide the specialized services needed by these students, funding can no longer be established by using a single formula to serve all program areas.

A decrease in funds, but no decrease in needs to be met in serving an increasingly diverse clientele, is the message from authors writing about the financial squeeze the public schools will experience all through the eighties. These needs are documented in detail in part two.

LACK OF UNIFIED DIRECTION

"When goals are clear," Kiernan writes /11 (146)/, "schools can be extraordinarily effective," but it is the consensus of writers quoted in this monograph that such a clear direction is not available to educators needing to make decisions for 1980.

Goldhammer /1 (4-5)/ believes one reason for lack of agreement about education's role is a fragmentation of leadership emanating from the community today such that "it is doubtful that we can isolate, as we could twenty-five years ago, a stable community leadership." He goes on to describe leadership today in these terms:

> Leadership tends to be exercised to serve the purposes of specific advocacy groups, rather than the needs and welfare of a particular institution or of the general public. This is reflected in education through the confrontation of diverse advocacy groups to gain control, their insistence upon selfish ends being fulfilled, their reluctance to support financial matters relating to schools unless their demands are met, and so forth. In the current situation, children are held hostage to the purposes of these groups, and there tends to be no basically organized group or lobby from the public whose major thrust is to serve their common educational interests.

Dillon-Peterson /30 (368-69)/ concurs, adding her view of the possible effects on public education:

> The growth of citizen militants and demands for involvement have placed the school district in the uncomfortable position of having to attempt to respond to a variety of publics--frequently publics which are in direct disagreement with each other. And these publics show little tendency to collaborate or even to compromise in meeting mutual goals, relying on such confrontation strategies as those promoted by Saul Alinsky to promote their causes. As these demands become progressively more difficult *in toto*, it is likely that many high quality individuals will become disenchanted with the abuse they must take and will leave administration and teaching. Equally as sad--or perhaps even sadder--effective, conscientious board members who are interested in looking at the total picture and promoting quality education for all youth within the limits of the community's ability to support will find the personal sacrifice and psychological harrassment not worth the effort and will abandon education to those with more narrow special interests, impoverishing it even more.

A further complication, as Goldhammer /1 (5-6)/ notes, is the "fragmentation of leadership and interest within the education profession":

> There was a time when the National Education Association could justifiably claim that it was the professional association of educators. All levels of educators belonged (or could belong)...
>
> No longer is this the case. As NEA and its state affiliates began to transform into unions to serve the ends of the classroom teachers rather than of all education, educational groups which were presumed to have interests divergent from teachers were thrown out, leaving a hitherto universalistic organization particularly singular in its concern. The transformation of NEA's interest was well established when it ceased to support the Educational Policies Commission, which had been a voice for all education, the public interest in education, and an advocate for adaptations to improve the relevance of education to current societal and individual needs.
>
> The result of NEA's action, abetted, to be sure, by the self-serving interests and actions of other professional organizations, was to develop leadership over particular groups serving the interests of educators rather than clientele. Almost nowhere in this country is there a specific educational reference group solely and disinterestedly serving the needs of children and utilizing its power and resources to enhance the schools' capabilities for serving them.

Dede /3 (37)/ predicts that the current "dissensus" on the basic content of education will widen and then presents a challenge to educators:

> The challenge for educators will be to shift from a reactive to a proactive reconstructionist position which chooses among the options in this struggle by taking a united, professional stand on the future of schooling.

It should be noted that agreement on a unified direction for education by no means precludes agreement that differences shall be provided for. "Unity with Diversity" can be a meaningful slogan for the 1980s.

AT ISSUE: THE SURVIVAL OF THE PUBLIC SCHOOL

The setting in which educational decisions must be made in the years immediately ahead includes a real threat to public schools. The National Committee for Citizens in Education /12 (151)/ wonders whether the "disenchantment and frustration by a sizable segment of the nation's population with the public schools is now such that the public schools are indeed at a crossroads and their survival is indeed in doubt."

Farr /8 (107)/ names one trend that threatens the Jeffersonian mission of education:

> ...the voucher system proposes to allow parents to use public money to send their children to any school they choose. By applying their vouchers along with personal funds, more affluent families can afford private schools; less affluent families will need to rely on a severely diminished, fund-starved public system.

Benson and Hoachlander /10 (136-38)/ present an analysis of "some troubling and paradoxical directions in recent proposals" for "privatization of public education":

> Historically, despite strong dissatisfactions with the processes and achievements of America's public schools, reformers have rarely questioned the intrinsic value of *public* education. Schooling, with all its faults, has been understood to be a collective concern, deserving not only of substantial public funds but also of direct public involvement in its provision. If schools have had problems, these problems have not been seen as a product of the schools' publicness *per se*, but rather that schools have been given a difficult public charge to address complex social and educational problems.
>
> As we enter the 1980s, there is some evidence that these perceptions are changing. A growing number of people are attributing the failures of public schools to the simple fact that they are public. Hence, several reformers are pressing for a radical change in American education--a public policy that would privatize public education. Public schools, they argue, will do a better job of educating America's children if they became private schools, subject to the rigors of consumer demand and efficiencies imposed by the market.

They go on to show their understanding of parent interest in privatization of public education, but continue with an evaluation of the likely consequences:

The promise of most privatization initiatives is a relatively small personalized school free of the curriculum controls of state bureaucracies and responsive to the concerns of parents and the individual needs and interests of their children. It is a school that can be held accountable or easily abandoned for another if it fails to deliver a sound educational program. It is a school where parents of like mind can organize a curriculum and teaching environment free of the conflict engendered in a school where parents with competing interests are trapped by the administrative boundaries of school attendance areas. It is a school where choice can be exercised freely and responsibly in the best interests of the child--interests determined by those in the best position to judge what they are, the parents. Such is the promise, and were privatization able to accomplish it, one might judge such a change beneficial in a pluralistic society with a strong commitment to individual freedom and responsibility.

We believe, however, the promise is mostly illusory and in being so diverts public attention and energy away from addressing the very serious problems that beset our schools. Although the middle class probably stands to lose little from privatization, we suspect they will be sorely disappointed in the gains. The elite private schools, which are the models many hope an expanded private system would emulate, are not likely to be any more accessible to middle class families than they are now. If they are eligible for public funds and willing to participate in voucher programs--two events that are by no means certain--they will be so oversubscribed that extremely competitive admission standards or admission by lottery will exclude most students. Most parents will have to choose among newly formed schools with no reputation or record of successful teaching. If experience with private trade schools is any indication, many of these new schools will surely fail as a result of administrative incompetence or fiscal mismanagement, and some few will undoubtedly try to exploit the new market for private education with fly-by-night operations established to turn a quick profit. In either event, parents may find that schooling for their children becomes much more unstable than they had anticipated.

For the poor, consequences may be more serious. For those able to escape the chaos of center city schools, privatization will be seen as beneficial. But they are likely to be few in number. The poor have been concentrated in center city schools in large part because they have been concentrated in center city neighborhoods. Transportation to schools in better parts of the city or in the suburbs is likely to pose

> costly and insurmountable barriers for most poor families. Poor parents will face the same problems with organizing or choosing among new schools that are accessible....
>
> More troubling is the fact that when schools are subjected to competition for students, they will be subjected to intense pressures to demonstrate results of good teaching. Were we able to define and identify good teaching more clearly, this might be a welcome development, but as it is, the easiest way to show evidence of good teaching is to admit only good students. Schools will be very reluctant to admit students who are likely to be poor achievers, create discipline problems, or require costly special services. This disincentive will create problems for rich and poor alike, but the effects are likely to fall disproportionately on minorities and the poor, whose children because of a number of social and economic inequities are more likely to have difficulty achieving in terms of the educational standards determined by the white middle-class majority. Consequently, these children may become increasingly isolated in the public schools that become a dumping ground for underachieving children with serious disadvantages and special needs.

Dillon-Peterson /30 (367)/ comments on talk of voucher systems and an "increasing tendency for those who can afford to do so to seek private school education":

> The spectre of a school system which has been desegregated by court order and which has become re-segregated through this process {of privatization} is frightening.

Curran /9 (126-27)/, on the other hand, presents a case for nonpublic education:

> Nonpublic schools foster healthy competition and innovation....
>
> The presence of private schools in cities evidently has a stabilizing influence against flight from cities.
>
> Those who stay and choose nonpublic schools do not increase the demands on public education in the cities but do contribute to its support.

Curran proposes relief, such as the tuition tax-credit idea, for the double burden of tuition and taxation carried by parents electing private schools for their children.

Jordan /20 (239-40)/ sees dangers in the use of public funds for nonpublic schools:

If increases in the number of nonpublic schools with diverse orientations continue in the 1980s, support for some type of public funding is likely to increase. Political response to this support is evident in the voucher proposals introduced in Michigan and California and the tax credit legislation that has been introduced in various state legislatures as well as in the Congress. Some of the current proposals would not be sufficient to pay the full educational cost, but the option of private education might be more attractive to some parents with the incentive of the tax credit.

Even though the concept of public funds for nonpublic schools has certain attractive features, such as parental support and fiscal relief for institutions, there are also risks, costs, and concerns. First, there is the constitutional issue of separation of church and state and the possibility that "excessive entanglement" might result from the provision of funds even though several alternatives have been proposed. Second, individual states have had widely varying levels of success and interest in their efforts to set and enforce standards for nonpublic schools. Third, the issue of eligibility criteria for nonpublic schools to receive public funds remains a point of contention. These criteria include nondiscriminatory admission standards, health and safety standards, adequacy of program offerings, adequacy of equipment, quality and adequacy of staff, and sufficiency of support services.

Candoli /15 (187)/ sums up the situation well:

> ...At issue is the survival of public education in the United States. Program technologies are and will be abundantly available. Whether these technologies will be made equitably and fairly available to all members of our society is a major issue to be addressed by the Congress.

GROUNDS FOR OPTIMISM

Along with the worrisome conditions within which educators of today must operate are some grounds for hope. Bailey /14 (173-84)/ devotes his entire article to "the case for optimism":

> We are now caught up in the ebb tide of the great waves of faith in education and in knowledge itself that hit its peak in the mid-60s.
>
> But if we were then too buoyant, too sure, too optimistic, we are surely too discouraged, too doubtful, too pessimistic now. We should take pride and comfort in what we have learned in the past several years. Furthermore, there are new green shoots coming

out of every nook and cranny of the world if we only take the pains to look carefully.

What of lasting value have we learned from the experience of the past several decades?

First of all, we have learned that distant events have proximate effects...educators' links (directly or indirectly) to state capitals and to Washington, D.C., have increased a thousand-fold in the past twenty years.... What they do is conditioned and shaped by a hundred distant influences: court decisions, Federal laws and regulations, reporting requirements of state education departments, state wide minimum competency laws, state and national bargaining rules, state tax laws and referenda. If educators are not to be victimized by these distant forces, they...have to figure out ways to influence influentials in distant settings....

If educators have really internalized these propositions of connectiveness, they have learned one of the major lessons of our time....

So Optimistic Proposition #1 is that we are growing up. Educators are far less likely to be caught by Star Wars surprises emanating from other political and administrative galaxies than they were even a few years ago....

Second,...some extraordinary things have happened in the past three decades that only the least generous among American educators could rue. The fact is that the hard shell of caste and class that had existed since Colonial times in large parts of our nation has been cracked beyond repair in the last quarter of a century. However far we as a nation still have to go, minorities, women, the young, the old, and the handicapped, are finally being brought, in Winston Churchill's great words, "under the protective umbrella of the Constitution." This extraordinary happening--the explosive extension of the concept of fairness in our society--is fraught with unpredictable, uncomfortable, sometimes bizarre consequences. It affronts the comfortable--often hidden--class system that in older days offered ditch-digging to Italians and Dartmouth to WASPs. But it is an extraordinary moral triumph. It changes the definition of schooling from sorting to universal opportunity. That the in-baskets and telephone lines of educators are loaded with clinical problems related to the implementation of the new equities should be viewed by them as a kind of midwifery. In the context of considerable pain, blood, and anguish, they are helping a new world--a new freedom--to be born....

Third, I cannot help but feel that we are coming to the end of a decade of educational slobbery. Standards are once again becoming respectable. Whatever the perversities of decremental budgets--fewer real bucks next year than last--they can be used to separate the frivolous from the serious in curricular offerings.... The new concern with standards should infuse and infect all learning in all courses at all levels--in the arts and literature, in math and consumerism, in history and social studies, in science and language, in physical education and vocational education. For those educators faced with a high degree of turbulence and violence and disrespect in their schools--conditions that presently preclude learning of any kind, the thought of raising standards in the near future may seem fanciful and quixotic. But there is a growing public impatience with deviant behavior, and a growing willingness to try new combinations of humane discipline, occupational carrots, and national service to give young people a heightened motivation to take schooling seriously.

These, then, seem to me causes for optimism: the growing maturity of educators about the interconnectedness of things, their increasing realization of the revolution in fairness that presently permeates our society; and a growing impatience with laxity, in all walks of life, but especially in education.

But are there evidences that schoolmen and women are acting on the basis of these triple manifestations of optimism? There are indeed. Here is a sample of what is happening--some of the green shoots that are coming up all around us.

First of all, there is good news about the educability of poor kids--especially blacks and Hispanics. For a dozen years we heard little but doom and gloom from those who reviewed the evidence on compensatory education.... analyses seemed to prove that low-achieving minorities do not respond educationally to the infusion of new money and new pedagogic strategems.

In July 1978, the National Institute of Education issued a mammoth study of compensatory education. The study found, mirable dictu, that Federal money targeted toward poor children actually went to where poor kids lived: central cities, rural areas, and places with high proportions of minority group children....

Has this additional and targeted money made any difference in learning? NIE's findings document that compensatory instruction can have a considerable effect on learning. Overall results show that aided children made significant achievement gains. First graders in the study made average gains of twelve months in reading and eleven months in mathematics during a seven month period....

The NIE evaluation is buttressed by the seminal work of Benjamin Bloom and his associates in Chicago. In his experiments in "Mastery Learning," he and his colleagues have discovered that most children--all but the most severely mentally limited--can achieve criterion-referenced standards in basic skills if they are given suitable diagnostic services and remedial exercises.

As Patricia Graham has pointed out recently, we now know that the major culprit in the poor learning of the poor is not their genes, but family background, lack of expectations on the part of teachers and administrators for students to achieve, a curriculum that makes few demands on students, and inadequate demands on students to complete what they have been assigned.

Experiments all over the nation are providing cogent answers to these failures:

Item: Boise, Idaho, develops a structured tutoring program using fifth and sixth grade students to tutor second and third grade learners. Empirical evidence indicates that math and reading skill deficient children can make major gains using trained student tutors.

Item: Minneapolis establishes basic skill centers for functional illiterates in grades 4 through 9. A multi-media approach is used including teaching machines and individualized instruction. Students make cognitive gains well above what would have been expected for average children working at the reading levels of the measurement tests.

Item: Cleveland enriches and extends the school year for 1,500 children from five elementary schools. The program includes teacher-parent conferences and special arrangements. Learning results: positive....

As John Gardner said, "Little bits and pieces of the educational revolution are lying around only waiting to be put together."

In the second place, there are other kinds of green shoots of a pedagogic nature. The work that Julian Stanley and others are doing with the mathematically gifted; the work of Patricia Krus and others in educating the mentally handicapped; the work of Ira Finkel in developing imagination and creativity in children; Jeanne Chall's seminal work in the teaching of reading....

WCET-TV...Cincinnati has successfully articulated television and videotape with regular teaching to the enrichment of the curriculum and the improvement of student motivation and performance.

Third, there are increasing numbers of non-pedagogic, logistical, support service green shoots.... new ways to achieve fuel economy, new economy through central purchasing, more efficient and economical bus routes, etc. Alas, most of the time educators lack time, energy, staff, or other resources to follow up on such leads, to adapt them, and to adopt them.

But this leads me to my most central cause for optimism.... Educators are now growing up. It is painful to live without the illusions of Santa Claus, and without the comfortable assurance that someone somewhere else can be viewed as the real villian. But there is a marvelous buoyancy in growing up.... This does not imply that the stinginess and unreasonableness of others may not on occasion be contributing factors to the malfunctioning of our schools. It does not mean that schools can suddenly and easily make up for the deprivations and angers that kids import from their homes and from the streets. It does mean, however, that teachers and administrators first search for creative answers rather than scapegoats. Sometimes creative answers involve transplanting green shoots from other experimental settings. Sometimes they imply a new initiative with a supervisor or board. Sometimes they must take the form of calling up influentials in the state capital or Washington. Sometimes they involve going public on television and radio or in speeches to the Rotary Club explaining the probable or actual consequences of budget cuts or new tax laws.

Perhaps the most essential task is explaining patiently and systematically to parents, officials, and taxpayers what schools are for and what they can and cannot do.

During the Battle of Britain, Winston Churchill was once asked by an old lady in tennis shoes why Britain fought. He replied, "Madam, you would find out if we stopped." What if our public schools stopped? What if the buildings were all torn down and the administrators and instructional staff dismissed? They would be reinvented in a flash--to perform day care functions for working parents, to serve as civic centers and polling places, to provide cultural and competitive excitement in communities, and of course most essentially to give young people the intellectual skills and the career and aesthetic dexterities needed for coping, for earning a living, for self-fulfillment, and for responsible citizenship. In recent years, schools have been given additional mandates: they have become health dispensaries, food dispensaries, racial laboratories, career counseling centers, adult education emporia, community gymnasiums. All of these are or can be rationalized as educationally related. But someone must explain that if budgets are cut year after year, school priorities must be set. Other institutions in the community can be asked to assume responsibility for some of the functions now being carried out by the schools. But no other institution in the community is capable of developing the cognitive functions which are the heart of the educational

> mission. This is what must be defended against all comers and against all peripheral claimants....
>
> The ultimate cause for optimism is not that our problems will disappear. Some will get worse. Some, like the battles over school closing, will largely dwindle and disappear by the middle of the '80s. But other grinding issues will take their place. The real cause for optimism is our own growing maturity, our unwillingness to be intimidated, our recognition that complexity is in fact negotiable.

Bailey's optimism is supported by Howe /5 (71-2)/, who calls attention to recent research in London by Michael Rutter and his colleagues:

> They appear to me to be well on the way to proving that schools with certain characteristics can and do make a difference to so-called disadvantaged students, and to proving in addition that the factors in schools that matter most in determining their capacity for positive influences on "pupils' behavior, attendance, exam success and delinquency" are "the characteristics of schools as social institutions." Their study concludes "that schools can do much to foster good behavior and attainments, and that even in a disadvantaged area, schools can be a force for good" (Rutter et al. 1979, p. 205).
>
> These are refreshing assertions in the face of the oversimplified generalizations that the United States media have popularized to the effect that schools don't make a difference...schools may not be able all on their own to overcome all the effects of poverty and discrimination, but there is clear evidence in Rutter's research that they can be much more effective in moving toward this goal if they are properly organized and operated. This will come as no news to many teachers and principals, but it may surprise a few social scientists, who are accustomed to judging the schools by reading computer printouts rather than visiting them {the schools}.

Ashton /43 (577-78)/ also refers to studies concerning the impact of teacher behavior:

> A number of recent studies have attempted to explore the effects of varying teacher behavior in the classroom and have found that significant effects on student achievement are possible using this approach. For example,...Cahen and Filby (1979) are studying the effect of reducing class size and experimenting with ways of working effectively with small groups. Anderson, Evertson, and Brophy (1979), Good and Grouws (1978), and Gage (1978) reported substantial success in increasing student achievement through training

> teachers to use specific techniques.
>
> The Follow-Through evaluations revealed that teacher effects vary for different student outcomes; for example, a high rate of drill, practice and praise resulted in significant gains in reading and math test scores for low SES children in grades one and three, while opportunities for child-selected activities and considerable self-direction resulted in evidence of greater independence, cooperation, curiosity, problem-solving ability, and increased school attendance (Stallings 1977).

Botkin /40 (535)/ ends his article with perhaps the most optimistic thought of all--"for all practical purposes, there seem to be no limits to learning."

CONCLUSION

Educators might be bolstered by the sure knowledge that there are well-run schools and effective teachers continuing, in spite of obstacles, to make a positive difference in the lives of their students. However, many of the elements in the setting of education in this decade--lack of public confidence, the media's disregard of the schools' success in developing a literate and skillful population, ill-conceived plans for developing and measuring competence, taxpayer revolts--these could discourage today's educators from attempting anything more than to keep afloat as they are asked to take on broader responsibilities for a more diverse, albeit reduced, clientele, while adjusting to more slender financial support. All this they are to do with a divided profession and a fragmented public.

What should be built into the initial and continuing preparation of teachers, supervisors, and administrators to enable them to cope with the complexities of modern day education presented in this part of the monograph? First, professionals must operate on the basis of facts. This means knowing how to arm themselves with accurate information about such matters as how well the schools are doing, teacher supply and demand as projected at the local level, and trends in the size and composition of the student population in a given district. Second, professionals must be well aware of education's history in this country. This includes knowing how public education was won in the first place and what the threats are to its viability now. It also includes knowledge of a whole series of attempts to establish overall purposes of education in a democracy, including those by the Educational Policies Commission, beginning in the thirties. Third, professionals must be skilled in interpreting to the public the processes and products of education as well as the need for financial support so that educators can do what the public expects of them and what they expect of themselves.

For further ideas on content of a preparatory program, see the conclusion to part two, and all of part four.

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PART TWO

CHALLENGES FACING THE EDUCATION PROFESSION IN THE 1980s

Challenges that educators face in operating in this decade are of a magnitude and novelty to call forth the best in the profession. They include: (1) questions of involvement in decision making, (2) futuristics, (3) basics for the 1980s, (4) balance and fairness in the curriculum, (5) environments conducive to learning, (6) neglected areas, (7) education as a lifelong process, (8) education and work, (9) appropriate evaluation and research, and (10) education of professionals.

PARTICIPATION IN DECISION MAKING

Waiting for resolution in the 1980s is a two-pronged issue related to making decisions in education: (1) What are the appropriate roles of Federal and state governments and of local education authorities, and (2) at the local level what part is to be played by school principals, teachers, students, and community adults in partnership with central office personnel and Boards of Education? Wegmann /23 (283)/ has put the general problem well:

> At the elementary and secondary levels, public education is characterized by an extraordinarily large number of groups who may legitimately claim a voice in the decision-making process. Parents, teachers, principals, central office personnel, superintendents, school board members, taxpayer groups, state boards and superintendents, the governor, the legislature, Federal officials, and even the students themselves can all quite legitimately say: I have a right to participate in the making of that decision. This makes educational leadership extremely difficult, since any one of these groups may, in effect, veto a decision. As a result, it is often easiest to do this year essentially what was done last year.

Locus of Control

The first prong of the issue, appropriate roles at different levels of remoteness from a single school, is tied closely with funding of education and the attendant locus of control. Kiernan /11 (147-49)/ furnishes a basic analysis of the situation in a segment entitled "Who Does What?":

> During the debate on the Department of Education Act of 1979, the opposition made frequent reference to the dangers of federalism. Within months of the establishment of any such agency they predicted a Federal take-over and the subsequent collapse of the state and local education agencies. Had they scrutinized the conference committee bill more carefully they would have seen the clear statement that the establishment of the Department *shall not increase Federal control of education*. In fact the legislation specifically prohibits Federal control. This does, however, suggest a review of the functions and responsibilities of the local, state, and Federal partners....
>
> Although an obvious oversimplification, education continues to be a *local function*, a *state responsibility*, and a *Federal concern*. How well each partner is performing its role will be a subject of increasing debate in the eighties.
>
> *The State's Role*. The *jurisdictional and leadership* function should remain with this partner...{state education} departments are in a unique position to provide a type of educational leadership which, because of a variety of local conditions, schools and colleges cannot provide....
>
> *The Local Role*. The *operational function* should be found on this level. When breakthroughs have been made in establishing quality programs of education they have usually resulted from local initiative.... This does not mean that the state partner should not maintain minimum standards beneath which no community would be allowed to fall; or, should not exercise continuing leadership. The state cannot abdicate its responsibility for these any more than it can refuse to carry its share of the financial burden. Citizen involvement and grass roots support, however, must remain characteristics of local school districts even more so during the next decade.
>
> *The Federal Role*. A *supporting function* should be assigned to this partner, as the Federal government can and must increase its contributions to education. With its broad tax base, it is in the most strategic position among the partners to highlight national needs and to eliminate local and state inequities.... assistance for our schools and colleges must come from where the money is--at the Federal level.

Stake /13 (162, 167-68)/ is bothered about diminution of local control in the schools in the United States:

> As with many institutions in our society, the public schools have become increasingly oriented to state and Federal standards, less oriented to the standards of family and neighborhood. Although state and Federal standards are not indifferent to the concerns of family and neighborhood, they are not pluralistic, but rather emphasize uniformity and interchangeability, characteristics which often lend themselves to more effective review and control of the schools. Such standards sometimes make teaching more uniform and efficient but narrow the purposes and the effectiveness of schools in providing educational opportunity....
>
> We probably would be better off with less subordination of the education purposes of schools to economic and political purposes of the country. The schools need more help with their formal mission, to provide educational opportunity. It might help to formalize two "rights": the right of a parent to the kind of teaching he or she wants for his or her child and the right of a student to a learning situation where other students are ordinarily serious about (or at least tolerant of) academic learning. Current priorities would have to change to accommodate those rights, and the most likely way of getting those changes would be to re-establish the standing of local control.
>
> It is a difficult thing, probably, for government people to accept the idea that the most responsible thing to do is to exercise less direct responsibility, to be greatly concerned and supportive without specifying the improvements to be made. But education today needs just that, the opportunity and the responsibility for local schools, for teachers in the classrooms, for citizens in a neighborhood, to run their own schools.

Participation at the Local Level

Most of the writers who discuss decision making at the local level advocate participation of teachers, students, and community adults. Candoli /15 (194)/ submits that:

> ...only when parents, students, and staff work together to identify and meet local educational needs in an atmosphere of trust and mutual respect under the leadership of a caring and knowledgeable principal, will the individual learning needs of students be met. The local unit (building) must have the capacity to prioritize needs, to develop specific programs, to

> select appropriate materials, and to provide the necessary methodology to deliver the programs to the clients.

Goodlad /54 (683-84)/ addresses the problem of who shall participate in making curricular decisions. He has found the local school not strong as a curricular planning unit, and he recommends that there be centers outside of schools to give full-time attention to curriculum development. However, he adds that "even an array of dynamic curriculum centers--whether national, regional or relatively local in scope--is not sufficient to assure sound curriculum options for children and youth in each school." Even though the local school is a relatively weak curricular decision-making unit at present, nonetheless it is in the individual school that the fragments of curriculum developed elsewhere must come together into a comprehensible whole. Goodlad writes:

> For this sensible state of affairs to occur, there must be a school-based planning process in which all those connected with the school are in various ways involved. The teachers are the professionals in this process... The principal is the responsible leader, by position if not appropriate preparation.
>
> The essential ingredient is time. Currently, there is not enough of it. Teachers begin their work year shortly before the students do and end it a few days after the instructional term comes to a close. There is no time at the beginning or end of the school year or during it for the kind of sustained planning implied. Teachers are hard-pressed as it is to find planning time for the hours they teach each day. Most principals are employed for eleven months each year but there is little curriculum planning they can do apart from teachers.
>
> The obvious solution is a costly one: Cadres of teachers must be employed for additional days each year to assure that a viable program of instruction always will be in place. Their work must be school-specific with support from the district office. And this additional time must be devoted exclusively to the school's curriculum and not teachers' own lesson plans. The principal must be the overall coordinator of the process.
>
> The cautioning question is whether or not principals and teachers are up to it. However, even if many are not--yet--there is no good alternative to placing responsibility for determining the curricular dimensions of the individual school squarely on those who staff it, with appropriate participation by other responsible parties, including parents. Shifting authority and responsibility to more remote levels, such as the state capitol, is only to assure less relevant decisions and to delay the process of

> developing teachers and principals capable of the planning required. State authority must articulate broad goals, assure certain quality controls, and provide basic resources. It must not mandate the specific configurations of local school curricula.

Perrone /38 (491)/ provides an additional reason for participation in decision making at the local level. He observes "a tendency for teacher-administrator relationships to deteriorate to the detriment of children, young people, and their parents.... Their professional organizations {have become separated} and the labor-management postures that have developed {with unionism} have contributed to a divergence of educational interests and agendas." This separation may be bridged by placing "more educational decision-making responsibility at the school level.... It is here that teachers and administrators, along with parents, can coalesce their energies and interests as the children are real and visible.

One principle for governing a school, which Wigginton /34 (429)/ advocates, is that students must be allowed a measure of control over their school environment and a degree of decision-making responsibility within it. "The general rule of thumb we use" {at the Foxfire school}, he writes, "is to turn over to the students all decisions concerning our organization that they themselves can be responsible for and implement to completion."

Ashton /43 (571)/ also urges student participation in decision making, giving as reasons for her recommendation:

> If schools are to be successful in fostering intergroup relations, opportunities for all groups of students to participate in the decision making that influences the school are vital; by forming cross-role decision-making groups (that is, groups comprised of students, teachers, administrators and other key school and community members) with legitimate authority to decide on innovations in curriculum, educational resources, school policies, etc., students could obtain a sense of collective power that would be very effective in providing them with a sense of common purpose. In addition, training in strategies for gaining and using power effectively could provide students with skills that would provide valuable alternatives to violence and apathy (Wittes 1970).

Parent and citizen involvement in decision-making drew many comments among the writers. The National Committee for Citizens in Education /12 (158-59)/ states its beliefs thus:

> ...parents and citizens must continue to make every effort to influence policy at the Federal, state, and local district level. However, their involvement will be most meaningful if they have a voice in what happens in the education of a child attending a particular school....

> Just calling for and endorsing this concept will not, in itself, create shared decision making at the local school site. There must be a formal mechanism which provides genuine authority for a school council involving parents, teachers, administrators and students to make decisions affecting that school. School boards and superintendents must delegate a significant portion of their perceived and real prerogatives to that council and devise carefully drawn but not oppressive limits to its authority. Each district can determine its own limits and then the councils must be trusted to make decisions in the best interest of their children.

Perrone /38 (489-92)/ draws attention to the need for better roles and training for parents and other citizens:

> ...At the moment Parent Advisory Councils (PACs), associated with programs such as Title I, have had only limited success. Much more attention needs to be given to training programs and to the development of more effective, less ambiguous, roles for PACs. Such groups might, for example, with considerable assistance from state education agencies be given far greater responsibility for the evaluation of Title I programs as a means of increasing their understanding of education and their political power in support of their children....
>
> The challenge for state departments in the decade ahead is not more centralization but an increased capacity for providing curriculum, evaluation, staff development, parent training resources to local school units. The goal needs to be one of increasing the competence of individuals within local districts rather than centralizing competence at the state level.

THE FUTURE AND THE CURRICULUM

Several of the authors discuss diverging ways of viewing the future and preparing to deal with various possible futures. Of great concern is how educators will respond to the challenge of preparing students for futures no one can foresee. Wegmann /23 (288)/ suggests two major uses of research on the future:

> 1. To select the most beneficial scenario from among multiple possibilities and to work to make that scenario more probable than any less desirable outcomes.
> 2. To develop the habit of positioning oneself to handle any of a number of possible contingencies, and perhaps particularly to be able to minimize the loss in any given situation.

Gappert /21 (248-55)/ discusses social change that will have educational consequences:

> Most futurists are agreed that we are now post-something, but they disagree on how to characterize our situation--"post-" what? Michael Marien (1976) has tracked over sixty definitions or descriptions for the projected society of the future.... These images and metaphors are attempts to bring some kind of thematic unity to the myriad bits of the future emerging in contemporary society....
>
> Some kind of symbolic reconstruction and theoretical integration seems to begin to happen as we treat the future as both a continuous and discontinuous projection of the present and the past. Out of these projections we can fashion a series of mental images around which the future can be analyzed. For our purposes, three such constructs can be useful. These are the notions of post-affluent, post-industrial, and post-macho. Each is a meaningful way to organize an analysis of the future which builds upon the crisis and circumstance of the late 1960s and the 1970s.
>
> <ins>The Post-Affluent Prospect</ins>. ...conflict over "income shares" will be one of the primary dynamics of the post-affluent transition. The concerns are real. The super-affluent aspire to discretion over savings and investments. The affluent expect discretion over spending, either through disposable income or the provision of credit. The sub-affluent struggle to maintain discretion over the conditions of basic maintenance. In the meantime the subsistence sector has no discretion at all except perhaps in the unorthodox opportunities of the subculture of the urban underclass.... a national debate over a "just" distribution of income has begun. The unusual sense of abundance and affluence that flourished from the end of World War II until the early 1970s is hard to dispel. It has strongly influenced several generations. The baby boom of the same two and a half decades has also created a "Bulge Generation" which grew and was socialized around the material realities and social illusions of that affluence. There will never again be, in this country, a generation of youth that had it so good. Affluence is now behind us, but we have survived it. It is unclear, however, how its memory will affect us or that unique generation that was nourished into adulthood from a basis of unprecedented material prosperity.... As they enter the workplaces and communities of the adult world, their behavior and values will be... indirectly manifested in the dynamics of the marketplace and in the evolution of the social economy. The post-industrial workplace will be changing.
>
> <ins>The Post-Industrial Workplace</ins>. The generation

> growing into their late twenties in the decade 1970-1980 are entering a post-industrial marketplace where so-called service jobs are the primary economic influence. This service economy demands new kinds of interpersonal relationships among workers, between workers and management, and between workers and consumers. For most people the work experience will have a strong social element....
>
> There will be three types of service workers. Type K will be knowledge workers. Type C will be the lower class clerical and counter workers. Type P will be specialists in protective services. Data analysis, environmental analysis and human analysis will be the basic skills required. These functions call for a new Three R's of the service economy--Recording (of data), Relating (to people), and Renewing (of knowledge).
>
> The Post-Macho Culture. The society in fact is going to become much more androgynous and will have a more even distribution of the characteristics of both sexes. What may happen is that a more balanced set of values will predominate in all our institutional arrangements, even in the military.

Botkin /40 (529-32)/ has something fresh and important to say about the role of learning and education in the modern world:

> The Changed Human Condition: The Emergence of a World Problematique and a Human Gap. Humanity is entering a period of extreme alternatives. Unprecedented human fulfillment and ultimate catastrophe are both possible. Scientific and technological advancement have brought unparalleled benefits, knowledge, and power--yet people today seem unable to grasp the meaning of their actions, leading to personal, societal, and global confusion. This incapacity to cope with currently accelerating rates of change is the root meaning of the "human gap."... It is a human gap, because it is a dichotomy between an accelerating complexity of our own making and a lagging development of our own capacities.
>
> This vulnerable situation is magnified by an equally alarming problem--the emergence and acceleration of a "world problematique" identified nearly a decade ago by the Club of Rome as an enormous tangle of problems in sectors such as energy, population, and food which confront us with unexpected complexity. While the techno-scientific enterprise has made some progress in addressing these global issues, its efforts are neither systematically nor globally coordinated. Seldom, if ever, is our vast assortment of resources mobilized across academic disciplines and national boundaries toward pursuit of common global goals on a long-term basis. The few existing evaluations or forecasts are narrow, fragmented, or

short term. As a consequence, humanity remains pitifully unprepared to cope with formidable challenges on the immediate horizon, and the overall human condition continues to deteriorate.

The Role of Learning and Education. Whether this deteriorating situation can be reversed depends on another major--and decisive--factor: human learning. It will take new forms of learning to help bridge the human gap by mobilizing our understanding and actions in order to come to grips with the world problematique.

"Learning," as used here, has to be understood in a broad sense. It is taken to signify a whole approach, both to knowledge and to life, that emphasizes human initiative.... probably none of us at present are learning at the levels, intensities, and speeds needed to cope with the complexities of modern life....

Those concerned with education must face a stark reality. Conventional schooling--a huge enterprise which directly occupies one of every six inhabitants of the planet and is supported by $400 billion annually--has failed to prevent deterioration in the human condition and indeed is contributing to a widening of the human gap.

This was not always so. History shows that in the past human learning has been largely successful. Throughout its cultural evolution, humanity has adapted to its environment, successfully if often unconsciously shaping its surroundings in ways that ensured survival of the species and that gradually increased the well-being of larger and larger numbers of its kind.

Maintenance, Shock and Innovative Learning. Today, serious doubt must be raised as to whether conventional human learning processes are still adequate. Traditionally, societies and individuals have adopted a pattern of continuous maintenance learning interrupted by short periods of innovation stimulated largely by the shock of external events. Maintenance learning is the acquisition of fixed outlooks, methods, and rules for dealing with known and recurring situations. It enhances our problem-solving ability for problems that are given.... Maintenance learning is, and will continue to be, indispensable to the functioning and stability of every society.

But for long-term survival, particularly in times of turbulence, change, or discontinuity, another type of learning is equally essential. It is the type of learning that can bring change, renewal, restructuring, and problem reformulation--and which can be called innovative learning.

Throughout history, the conventional formula used to stimulate innovative learning has been to rely on the shock of events. Sudden scarcity or catastrophe have interrupted the flow of maintenance learning and acted--painfully but effectively--as ultimate teachers. Even up to the present moment, humanity continues to wait for events and crises that would catalyze or impose this primitive learning by shock. But under current conditions of global uncertainty, learning by shock is a formula for disaster.

The conventional pattern of maintenance/shock learning is likely, if unchecked, to lead to one or more of the following consequences: (a) The loss of control over events and crises will lead to extremely costly shocks, one of which could possibly be fatal. (b) The long lag times of maintenance learning virtually guarantee the sacrificing of options needed to avert a whole series of recurring crises. (c) The reliance on expertise and short time periods intrinsic to learning by shock will marginalize and alienate more and more people. (d) The incapacity quickly to reconcile value conflict under crisis conditions will lead to the loss of human dignity and of individual fulfillment.

The net result of following any one of these paths is that humanity persistently will lag behind events and be subjected to the whims of crisis. The fundamental question that this prospect raises is whether humanity can learn to guide its own destiny, whether events or crises will determine the human condition.

A Conceptual Framework for Innovative Learning. ...We do not assert that innovative learning by itself will solve any of the pressing issues. What we do assert is that innovative learning is a necessary means of preparing individuals and societies to act in concert in new situations, especially those that have been, and continue to be, created by humanity itself. Innovative learning is an indispensable prerequisite to resolving any of the global issues. This is not to say, however, that other actions involving political power, technology, economics, and so on will not also make instrumental contributions, although innovative learning needs to underlie and penetrate these and other actions as well.

Innovative learning consists of two key elements: anticipation and participation.

Anticipation is the capacity to face new, possibly unprecedented situations; it is the acid test for innovative learning processes. Anticipatory learning stresses preparation for future alternatives, not adaptation to the present. Indeed, it goes beyond foreseeing or choosing among desirable trends and averting catastrophic ones: it is also the creating of new alternatives. Anticipation involves imagination, but it is equally based on hard fact. In non-anticipatory, adaptive learning, all we do is "react," delaying the search for answers until it may be too late to implement solutions.

Participation is a term that powerfully and controversially evokes the idea of the individual's and people's aspirations to be partners in decision-making, to strive for equality, and to reject unduly limiting roles. The demands for participation have become nearly universal and are being felt on every level from local to global. Nation states, especially in the Third World, are demanding to participate on an equitable basis in the world decisions that affect them--particularly on policies concerning global issues. Groups of every definition are asserting themselves around the world and renouncing marginal positions or subordinated status with respect to power centers. Rural populations are aspiring to urban-like facilities; factory workers seek participation in management; students and faculties demand a voice in administering important school policy; women are demanding equality with men. It is the age of rights and significantly not yet the age of responsibilities. An intrinsic goal of effective participation will have to be an interweaving of the demand for rights with an offer to fulfill obligations.

If participation is to be effective, it will be essential that those who hold power do not block innovative learning. A major task of learning in the next decades will be learning how to participate effectively. For in too many instances, "participation" as we know it today is in crisis. Some participants are more skilled at blocking proposed plans than they are in formulating constructive alternatives. Too much participation is short-sighted, which may produce counter-productive results when anticipation is lacking.

Yet not "participating"--remaining apathetic instead of empathetic or closed rather than communicative--makes one part of the problem. We are at the end of a time when decisions could be handed from the top down. A critical mass of people on an unparalleled world scale will have to work together, not so much to "solve" global issues as to generate a common understanding of them and a shared will power to address them. Activating the latent potential of innovative learning present in the world system hinges largely on the degree of effective participation at international, national, and local levels.

The aims of innovative learning are survival and human dignity. To put human survival in the forefront as the first purpose of learning signifies that this is not a metaphysical question; rather, learning has become a life and death matter. But survival at any price is not a sufficient ideal or cause. One must go beyond "submitting in order to survive." Human dignity is designated as the "beyond survival" goal. If

> dignity is a wide term with many meanings, it is taken here to stand for self-respect, for mutual respect for individuals in culturally diverse societies, and for the respect accorded to humanity as a whole.

Buchen /32 (379-81)/ looks ahead to the year 2000 in predicting five social trends that will affect education and in turn be affected by education. The first has to do with uncertainty about the future and "calls for considerable emphasis on adaptibility":

> {Forecasts range from} zero-growth at one end of the spectrum to growth-orgy at the other. And in between are all sorts of adjusted positions: steady state, dynamic equilibrium, moderate growth, etc.... A rapid way of preserving that diversity but containing it is to employ the notion of simultaneous futures, or why can't they all be right somewhat?... But what is extremely important about this trend of strong and intense differences of opinion about the future, is that whereas a business, a governmental agency or a religious constituency may have to ultimately plunk down for one kind of future to plan for and bank on, education can never put all its eggs in one future basket and still remain at least an advocate for the multiple and diverse interests of its students.... For every current and projected new component of the curriculum, we have to ask to what extent does that piece aside from apparently being needed now have the future potential of being durable, flexible, and transferable.... In design terms, what this all boils down to is the notion of an adaptibility curriculum for an uncertain future. We have no other responsible choice, for if the experts, including this one, are wrong in what they project, and if curricular thrusts are based on those projections, then we may produce the ultimate form of irrelevant education.

Buchen (381-86) recommends that the "four remaining trends should not really be disaggregated, for part of their power derives from their being so intertwined that they travel forward with the force of a reinforcing cluster." He continues:

> The four ingredients of this configuration are the creation of an incredible information society; a rage for quantification approaching the worship of numeracy as the future version of literacy; the development of technologies that bring about a symbiotic equalization between machines and human beings; and finally the increase in institutions and systems of organized complexity. All these trends already surround us today

but they will increase to the point where they will have the force of a difference not just in degree but in kind as well.

The creation of an information society without precedent in history is accompanied ironically by having less time and categories to absorb the new data and knowledge. Desperately, the increase in number of new specializations and disciplinary categories will continue and try to keep pace with the exponential explosion. There will also be more cross-disciplinary and cross-referenced information than ever before, although that proliferation will not be matched by a proportionate increase in the number of cross-disciplinary categories of disciplines....

As knowledge increases, there will be more knowledge obsolescence. In an information society that also means more people obsolescence. The notion of life-long learning as an option of leisure will be obscured by the more pressing necessity of workers having to acquire more and more education and reeducation....

Partly as a result of the information society, but also partly as a result of a host of other pressures--accountability, rigorous methodologies, pressures for validation and measurement, etc.,--quantification has become and increasingly will become the norm....

The trend toward numbers, like digital watches and calculators, is unmistakable. Indeed, my judgment is that there will be proportionately more use of quantification by the social sciences in the future than by the traditional hard sciences. The new priority assigned to numerical measurement and accountability is undoubtedly related to the discovery of limits--of limits to growth, caps to budgets, constraints on new appointments and progress, limits to debt, limits to taxes.... In short, whatever the fate of literacy, from a futures point of view we are entering an Age of Numeracy, which in turn exists in an unholy or holy alliance, depending on your point of view, with the Age of Technology....

What should be made clear from the outset is that the moment we designate technology as a crucial driving force in its own right... we are essentially describing an equalizing process in which machines begin to occupy a shared status with the humans who create them. The computer provides an excellent example. The first generation of computers... was really used as a mundane slave--doing the dirty work that we would not stoop to. Gradually, as the programming of the mechanical brain became more sophisticated, we sought to put upon the computer capacities which exceeded our own, in particular the capacity to juggle a number of variables at the same

> time. We succeeded here but it went beyond our expectations. Ordinarily, the computer so programmed would be merely a mechanical extension of our own ability. But what the computer did that we did not expect is that it began to tell us something that we did not know.... We had invented not a tool but a partner; and the moment that occurred human beings were poised for a future in which in addition to all the interpersonal and intergenerational relationships they had to form, they now had to prepare themselves for a futuristic relationship--a symbiotic one with machines....
>
> Finally, there is the long-standing trend which shows no signs of abatement--the increasing complexification of the world. By this is... meant...that because we know more our institutions and organizations have become denser. Warren Weaven calls the products of this structural replication, systems of organized complexity. Before him, Mumford with less pretense to objectivity dubbed them pejoratively megamachines. Modern corporations, with or without their multinational counterparts, have become enormously complex, diverse and interlocking as the most incredible super-machines.... Much of the recent density of the last ten years has been the result of acquisitions--of each major corporation diversifying so as to minimize risk and optimize investment and profits. The net effect is that many major corporations are little worlds--miniatures of the world at large in all its variety and extent.... Finally, megamachines have become more complex as the environment has become more sophisticated. It is as if the symbiotic relationship postulated between human and machines has been carried over to that between institutions and institutional environments. The symbiosis in this instance takes the form of converting external changes of complexity into internal versions of matching density.... What clearly has to be underscored for the future of students and of their education is that more and more people will be employed by structures of organized complexity and that somewhere in the curriculum it might be as important to dissect a megamachine as a frog.

From all that has been written about demographics and other indicators of future change, it seems clear that educators must not only attempt to meet and shape the future in relation to their field of expertise, but they should, if they are wise enough, make it possible for students to develop the inclination and learning styles to deal with the future in the same way. In short, educators should put the future into the curriculum.

THE REAL BASICS FOR THE 1980s

Every writer in the parent volume who comments on the "back-to-basics" movement maintains that going back to the old basics--simple reading, writing, and arithmetic--is not enough. All specify some basic(s) they deem essential for the kind of world in which we now live, and into which we are moving.

Kiernan /11 (146)/ believes that "the return to the basics in the eighties should be more than a slogan":

> In a highly technological society students must be taught a basic appreciation and understanding of science, the humanities, modern foreign languages, social studies and civic responsibility.

Iozzi /42 (550-52)/ makes a case for a broad range of skills with a values dimension:

> While no one can, with any degree of certainty, predict what future demands society will place on science, or, for that matter, what demands science will place on society, some things seem clear....
>
> Science and technology are able to deal effectively with issues of the "can we" variety, for these are decided by scientists and engineers on basic technical fact. Questions of the "should we" type require, on the other hand, the inclusion and consideration of another dimension--a values dimension. These values-based questions must, I maintain, be answered by society--people who are knowledgeable about the capabilities of science and technology--and their impacts and implications regarding such issues as justice, equity, and obligations, life, laws, individual rights, and so on.... To implement, as some have proposed, a program of instruction which emphasizes the so-called "basic skills" to the near exclusion of all else--especially how to use or apply those skills--is at best naive.
>
> In contrast, we must develop in our youth skills that are generalizable, flexible, and enduring; we must emphasize the development of what I consider to be skills which are at least as basic as any of those proposed to date. These basic skills, I submit, are problem solving, decision making, and a variety of analytical and critical thinking skills. Moreover, in developing these skills a moral/ethical dimension must be included if today's students are going to effectively--humanely--deal with tomorrow's problems.

Porter /4 (48)/ names four "life role competencies": skills in occupational and employability endeavors, aesthetic and humanistic appreciations, civic and social responsibilities, and personal and family management.

Jordan /20 (241-42)/ is concerned that, in a "world of limits," individuals may need help in changing their life styles:

> Schools may be asked to give their attention to student practices, values, and attitudes of conservation. It would be a significant challenge for the schools to foster this change in attitude and behavior in a culture long oriented to consumption, growth, and the assumption of abundant resources.

Dede /3 (31, 41)/ wants attention given to "higher order cognitive and affective skills required for participation in society," and later comments:

> I believe that the 1980s will be a grim period primarily because our society thought that it could get by with second-rate education for most citizens, that a high technology society could be run by a small group of experts and staffed by a large group of people with very little idea of how anything worked. This assumption was obviously wrong: a complex society requires that every citizen be as intelligent and creative as possible.

Ashton /43 (573-74)/ sees education for social responsibility as basic to survival:

> The American heritage of "rugged individualism" has received considerable criticism recently, as it has become increasingly obvious that survival in today's complex world is based on the interdependence, not independence, of individuals. Robert Hogan (1975) condemned Americans' obsessive emphasis on the individual's search for identity and attributed many of the current social problems, including alienation, suicide, the rising crime rate, and drug abuse, to the cult of individualism. To counteract these tendencies, Buchen (1974) has called for an educational focus on the relationship and responsibilities between individuals. Classrooms should be organized in ways that require development of skills of cooperation and communication. In today's world, sensitive consideration of one's behavior and its impact on others is essential in order that the best interests of all can be served. It is critical for our children's survival that educators accept as a major objective the development of students' sense of social responsibility and the interactive skills essential to interdependent living.

Wegmann /23 (285)/ sees the need to include "at least some familiarity with computers in the curriculum, since they will be so common that ability to understand and use them will become one aspect of literacy."

The authors in this section have advocated a broad range of basics as essential for survival and desirable living in these times. They include higher levels of cognitive skills, values, social skills, and understandings suitable for a democracy in an increasingly interdependent world, and attitudes and skills needed for rich personal and family living. Development of a curriculum that is so all-encompassing is the quintessential challenge in the 1980s.

BALANCE AND FAIRNESS IN THE CURRICULUM

The curriculum may be defined as a set of opportunities for experience and learning intended for the clients (persons to be educated). Two kinds of interlocking considerations are more than ever in the forefront for curriculum developers in this decade: (1) considerations of balance in the curriculum, as opposed to narrowness or a skewed focus; (2) considerations of fairness, that is, giving all types of persons a chance to receive an education useful for themselves and their society.

Provision for Balance

Curriculum proposals in the "Committee Print" are many and varied. Each may be judged for its potential contribution to a balanced and fair curriculum. Certain of the writers give a broad view of opportunities they would like schools to provide for all students.

Christensen /35 (454)/ has her own way of describing balance in the curriculum:

> Curriculum provides for both the disciplined, structured sequence of the craftsman and the freedom and invention of the artist. Spirited discipline of work hones the mind and makes it ready for the spirited invention and exploration which excites the mind to return to spirited discipline of work...and so on. Every field of study contains the "basics" of craftlike structure and the "basics" of artistic freedom. Both "basics" are interdependent and equally important. Such basics lead to a human product: skilled sensitive human beings who are enhanced in their ability to think, feel, and act. The success of this moving curriculum, embracing both discipline and freedom, depends on both the needs of the students and the gifts of the teacher coming together in some spirit of contagion.

Broudy /31 (375-76)/ suggests as a unifying principle "a return to a subject-matter general education curriculum K-12." This curriculum would contain strands having diversity within them "to accommodate individual differences in learning readiness but the design would be the same for all":

> Strand 1. The symbolics of information--the skills of language and computation.
> Strand 2. The key concepts of a selected set of the physical sciences and mathematics.
> Strand 3. Developmental studies in the three substrands: the development of the cosmos, the development of institutions, the development of the culture (arts and sciences).
> Strand 4. Problem solving of current societal import.
> Strand 5. Exemplars--a selected set of class works that are worth studying in great detail.
>
> The adoption of such a curriculum design would provide what a school and a school alone can contribute to the common needs of all constituencies, albeit not to their idiosyncratic interests. Special interests could be pursued as extracurricular activities or in private schools. Vocational training should be provided in great variety in postsecondary schools. If there is uniformity in grades K-12, we can have fruitful variety in subsequent grades. The return to a lean subjectmatter curriculum of general education would give an intelligible and defensible meaning to public schooling for the public good. Moreover, it would take seriously the rhetoric of equal opportunity; namely, an equal chance for all children to study the disciplines that provide the form and substance for an educated mind. Schemes that purport to provide equal opportunity by unequal programs are not equal.

Goodlad /54 (684-86)/, too, is interested in equality of educational opportunity, but finds it lacking in many schools, partly as a consequence of "tracking":

> One of the basic requirements of a democracy is that knowledge be humanized and democratized--that is, made understandable and available to the people. It is recognized that people differ widely in their desire and readiness for learning. But desire and readiness are themselves educable traits. Further, lack of desire or readiness today are not fully predictive of later lack. Consequently, we set out in this country to create an educational system equally available to all--at least, that has been the rhetoric.
>
> We know that this principle of equity has been less than adequately fulfilled in the past. With most children and youth up to the ages of 17 or 18 enrolled today in schools, we are too prone to assume that

> access to basic knowledge is almost universal. There is ample evidence to the contrary. The common practice of tracking students into separate sections of presumably similar subject matter often is defended as a way of recognizing differences in rates of learning. But in the 13 secondary schools examined in the Study of Schooling, the practice appears to result, frequently, in differentiating not only learning rates but what students study....
>
> We know that persons exposed in common to similar learning situations have very different learning experiences. The richer the situation, the more varied and richer the meanings derived are likely to be. But do we really want large numbers of students to be segregated into situations that differ markedly in the very content from which meanings are to be derived? Families provide enormous diversity in the knowledge, skills, and values derived by the young. Is there not something to be said, then, for a school that seeks to do something in common with this diversity?
>
> Another, perhaps more invidious separation, is between academic and vocational concentrations. Many academically oriented students elect to take some vocational courses but not to the degree that these jeopardize college preparatory programs. But it is clear that many students are so heavily into vocational subjects that transferring after the sophomore year into a predominantly academic program would be exceedingly difficult.
>
> It is often argued that these "nonacademic" students are being prepared for jobs and that this represents a commendable, traditional role for schools. But what jobs? And is this the kind of training prospective employers should be providing anyway? Perhaps too many of our young are allowed--indeed, encouraged--to opt out of general education long before they have acquired the knowledge and understanding they need for effective citizenship and vocational mobility.
>
> It is not enough, then, to create in the local school comprehensive curricula designed to promote academic, vocational, social, and personal goals, important though this task is. In addition, schools need to assure common access to this comprehensiveness, not deny it by early tracking into different subject matter or early preparation for job placement. Often, in the name of individual differences, we give up too soon on too many individuals.

Buchen /32 (389-96)/proposes sophisticated futures basics that would give an added dimension to the curriculum. These, he suggests, may be introduced as "an overlay of different kinds of organizing principles over existing content--in short, a series of process disciplines..."

The three components of futures basics, frameworks, methodologies and values, are offered as a "package" because, like the trends they have to confront and manage, they too exist as a reinforcing cluster. Although they are sequenced so as to nest within each other, each on a smaller, more intimate scale, they are all equal in importance. Indeed, each component would be not only impoverished but even imperiled if it sought to transcend or privilege itself over the others. Thus, no framework can sustain its holding power if it fails to support and accommodate methodological rigor and value judgments. Nevertheless, frameworks are put first because they dramatize the entire issue of form being in jeopardy.

When things change rapidly and discontinuously, one of the most significant signs of the times being out of joint is that forms--social, political, economic, aesthetic--lose their containing power.... The current need now and for the foreseeable future is for binders, stitchers, connectors--in short, for what rhetorically is called coherence. Although there are many sources, both old and new, that can be turned to for coherence, I am partial to two that have emerged since World War II and that have about them the promise of future durability, flexibility, and transferability; first the notion of systems dynamics and second, that of behavioral engineering. When converged they produce a powerful Behavior of Systems or how things work not only in themselves but in interaction with other things.

I value systems dynamics for the number of supports it provides in the quest for coherence. Most obviously, it studies the dynamics, the actual ebb and flow, starts and stops, of all kinds of activities and operations. It also compels an understanding of causes, not just symptoms, because it invariably involves modeling of how things function or dysfunction. But for our purposes what is most important is that the approach is holistic. Systems analysis courageously leads wherever the system operates and is no obedient respector of disciplinary boundaries, institutional turf, or formal protocols....

The alliance with Skinner to produce the composite frameworks of behavioral systems is sought because behavioral modification adds at least three special dimensions, especially for education. First, it ties systems behavior to human behavior, both individual and group, and thus personalizes and socializes the process of study and outcome. Second,...the study of change is justified by a conscious desire to change--to modify and alter behavior. The Skinnerian addition thus compels the model to be receptive to interventions and goals-infusions. Finally, Skinner assures bilateralism--namely, the awareness that although one is modified by the system one also modifies or can in turn modify the system....

If the function of frameworks is to generate coherence or miniature wholes, the function of the second component, methodologies, is to structure inquiry and to identify the actors in the system. Both components are designed to function as macrocosms and microcosms, respectively, but to do so in a relationship of equality. The larger framework must not be allowed to trivialize the hard-working methodologies which provide the system with its content; nor obviously should the data-generating process forget the larger reasons why the information is being gathered in the first place....

The basic skills of reading, writing and computation have to be supplemented by futures skills that better equip students in a race against information production. Thus, we need to teach not only writing, but also speed reading, memory training, listening skills, recall skills, concentration techniques, etc. We need to teach not only writing, but also note-taking, visual-thinking, outlining, precis, abstraction, epigramming, test-taking, and test-design skills. We need to teach not only mathematics, but also budgeting, graphing, statistics, income tax tables, cost-benefit determinations, catastrophe theory, etc. All these basic and future skills prime students as mental athletes and prepare them for more advanced and rigorous methodologies. But such subsequent progress is accompanied by extensive resource experiences which compel every student to become an informationist. Specifically, what have been traditionally designated as library and research skills have to be supplemented or recast into an expanded information resource technique. A taxonomy of information sources would be compiled, calibrated to minimum-optimum needs by grade level, and would range from books to data retrieval, from audio cassettes to video discs. Equally as important, information systems would be examined--how the census, for example, is assembled; how public opinion is sampled; what economic indicators are used to determine cost-of-living adjustments--and what constitutes clean and dirty data, what are legitimate margins of error, etc. The more advanced methodologies that would follow or accompany these information experiences would include problem-stating or problem-solving techniques, decision-making theory and process and above all anticipatory or forecasting skills. Aside from being rigorous and transferable in their own right, all these techniques have the special advantage of being fact-finding and research-oriented. Each methodology thus compels identification of the comprehensive and precise research and information needs of each problem, decision or forecast under consideration, and thus insures extensive and intelligent use of the information sources noted above....

My judgment is that the systems framework coupled with a number of methodologies to buttress it, can in fact bridge a number if not all disciplines with a commonality of reference points, terms, and tools that in turn can serve to accommodate the special methodologies used by each of them. Indeed, one of the most important futures directions of education may be the interacting and interfacing of methodologies from multiple disciplines....

The third and last component involves values, and here I have nothing original or unique to add to existing materials on values clarifications, but I would like to call your attention to education as a special values field, a perspective perhaps that has been forgotten or obscured of late....

...education can function not only as a significant social critic, but also properly educate its students as future social critics.

One of the most effective ways to make education value-laden or ethically charged is for subject-matter to be issue-oriented. Issue-oriented education is frequently polarizing--debatable, arguable, perhaps even ultimately uncompromisable or unresolvable. Aside from stirring the juices, the worth of such exchanges is that values do not sort themselves out into conflicts between right and wrong, but into conflicts between right and right. Those kinds of conflicts, which characterize most of the major differences of opinion in a democracy, are the hardest to handle and to solve, and ultimately require a blend of knowledge and judgment which is education's supreme contribution to citizenry.

But there is another, equally important, reason for advocating issue-oriented education from a values point of view. It is invariably anticipatory. That is, every crisis was originally a problem that was not first identified as an issue. Issue-oriented education can follow the law of escalation as it works an issue up to a problem and then in turn aggravates that up to a crisis. The potential for such a counter-productive progression according to the law of diminishing options directly taps the systems and methodological capacity of futures basics. Moreover, it is linked to the values exercise because escalation of this kind underscores the major failure to examine the consequences of one's actions, including one's inaction. Such a failure, from a futures point of view, is immoral. As such, it enables education to say unequivocally, "That's terrible! And we cannot let it happen. We have to address this issue before it gets out of hand." The moment teachers make that kind of

> comment, education has engaged the future of the future.

Provision for Fairness

While some of the writers stress the virtues of a common and balanced general education for providing equality of opportunity as well as contributing to socialization needed in a democracy, Goodman /36 (464)/ is concerned that "same may not be equal":

> The major educational achievement of the last decade was the rededication of our schools to equal educational opportunity for all American children regardless of race, ethnic, and socioeconomic background of parental status....
>
> Now we must actualize the promise: We must truly equalize educational opportunity. The key to this actualization is the central truth that _education must start where the learners are_. That means we must put the learners at the center of our attention: who they are, where they come from, where they're going. Equal educational opportunity is not the equal chance for everyone to become the same, to be exposed to the same materials, the same body of knowledge. Equal educational opportunity is the right to grow, to expand, to become more fully functional. If we've failed to meet the needs of the minority youth and the children of the poor in our country, it's because we've made them adjust to the school rather than adjusting the school to them.

Goodman uses language learning to illustrate "starting where the learner is" (472-73):

> If pupils come to school with a language other than English, then schools must accept that language and support the expansion of its use while assisting growth in productive and receptive control of English. We cannot impose the condition on non-English speakers that they must first acquire English before we will permit them to learn in school.
>
> If pupils come to school with a socio-regional dialect which has low social status, we cannot impose on them the condition that they must learn "standard" English before they may learn in school. And if, as is true of most bilinguals in the United States, pupils come to school controlling low status dialects of two languages, we cannot negate this strength and render them "nonverbal."
>
> Similarly, in recent decades ethnographic research has demonstrated that there are no "culturally deprived" people. All children bring a cultural heritage to school. Schools can be flexible and adapt

> to the cultural pluralism of American pupils and help them expand on their cultural heritage. In doing so they are working with pupils rather than at cross purposes to them. There is no need to force pupils to choose between what they are and what they want to become. They can develop pride in their ethnic, linguistic, and racial heritage as they expand their ability to function in wider cultural circles.

Dede /3 (36)/ makes a contribution to the concept of fairness in the curriculum with a discussion of "disparate but equal" education. He deals first with the disparate side:

> The roles which formal education plays in different types of communities may become quite disparate by the 1990s. Communities with a large percentage of two-wage families will expect schools to provide much higher levels of supervision and socialization than areas with predominance of one-income households. In metropolitan areas, demographic concentration of minority groups and immigrants (many non-English speaking) will create a set of educational needs quite different from those of suburban, upper-income areas. Schools (mostly private) that convert quickly to capital-intensive instructional approaches will have a very different classroom environment than the traditional, as will schools which respond to pressures for a meritocratic, high-powered system of gifted/talented education to train an elite capable of reversing America's problems.

On the "equal" side, Dede goes on to discuss the need for "some degree of national standardization and coordination" to provide for the "uniformly high degree of socialization requisite for functioning in a high technology society." He notes also that great mobility of the population makes it important to help students make smooth transitions as they move from school to school with diverse environments.

The concept of funded compensatory programs was designed to provide educational opportunities for children and youth whose previous schooling has been marginal. Jones /2 (15-16)/ describes a revitalization of such programs in Dade County, Florida, to provide a fair chance for all students to have a balanced curriculum:

> A wide range of educational programs funded through Federal or state legislative provisions, e.g., Title I and State Compensatory Education, requires that all funds be expended on a supplementary basis. Further requirements prevent the co-mingling of resources and the supplanting of any services or materials provided to students in the regular program.
>
> The traditional response to these requirements across the nation has been to schedule students into

> the specially funded programs during the school day. This causes the child to be denied whatever instruction was provided in the regular program for the duration of the specially funded program. This form of supplanting has been permitted to continue although it represents a clear denial of equal educational opportunity to students participating in the specially funded program.
>
> A national model must be developed which eliminates the negative educational aspects prevalent in current practice and increases students' opportunity to participate in a balanced curriculum. A program which attempts to deal with this problem is in its first year of full implementation in Dade County, Florida. It is called the Extended School Program (ESP) and has as its most unique feature the provision of additional or specially funded programs after regular school hours.... To assure the effectiveness of this program, a uniform instructional model has been implemented. This effort is intended to increase the opportunity for students to participate in a balanced curriculum during the regular school day and to reinforce and apply the skills introduced through regular programs. These programs are located at the student's home school, thus providing for a stronger articulation of skills between regular and Title I programs....

Coates /24 (294-95)/ gives data worth considering when planning a curriculum for those in whose homes English is not spoken:

> There is an interesting relationship between high school dropout rates and the language spoken at home. Where English is the language spoken, or where English is spoken along with some other non-English language, the dropout rate is between 8 and 10 percent. But where a language other than English is the only language spoken at home, the dropout rate rises to 38 percent.
>
> Among the specific population of those of Spanish origin, the situation is even worse. The principal non-English language spoken in the United States by people four years old and over is Spanish, spoken by almost 10 million people. Among school-age children, about five million speak Spanish as their primary language. Where English is spoken among families of Spanish descent, the dropout rate of their children is 14 to 15 percent. Where only Spanish is spoken, the dropout rate is 45 percent.
>
> Among students who do not measure up to standard performance, non-English speaking students represent the biggest problem. Only 10 percent of English-speaking students are two or more grades below their peers. In grades one through four, approximately

> 17 percent of the non-English speaking students are two grades below mode; at the high school level, some 35 percent are two or more grades below mode.
>
> The implication of these statistics is significant when they are coupled with the long-term movement of American society toward that of an information society. Approximately 55 percent of the work force is now in the information business. This situation raises questions about the value of bilingual education, and whether it denies students the chance for an economically useful education. The data suggest that, as now taught, students of foreign origin may be precluded from getting their first foot up the economic ladder.... Whether or not bilingual education continues, the steady stream of foreign-born students will renew the kinds of cross-cultural stresses associated with students who are hard to acculturate. This often results in delinquency and poor school performance, particularly for urban school systems. Proposed changes in the status of new illegal immigrants might encourage them to make greater use of the school system for their children. This will especially affect big-city schools and the smaller communities in the Southwest and in California.

Most writers subscribe to the view that being fair to each and every student requires a balanced curriculum that meets needs unique to certain groups and to each individual, and at the same time provides for common learnings required for satisfying, useful participation in the nation and world.

ENVIRONMENTS CONDUCIVE TO LEARNING

Articles dealing with learning environments include those discussing both psychological and physical aspects of the school. Use of resources in the community and the role of the mass media are treated as well.

Psychological Aspects

Writers dealing with desegregation of schools are well aware that environments conducive to learning have psychological as well as physical effects. Ashton /43 (570-71)/ cites findings of negative effects of various forms of desegregation as well as resegregation within a school:

> ...For the most part, educators have failed to respond to the challenge of providing learning environments that encourage the development of cooperation and social understanding. Research in contemporary classrooms dramatically reveals that the

> structure of current school systems tends to reinforce group stereotypes and polarities rather than foster integration and understanding.
>
> A number of studies of the effects of integration on social relations clearly indicate that integration of diverse racial groups does not necessarily result in increased interracial acceptance and interaction and may even have a detrimental effect (Schofield 1978). Similarly, research has repeatedly shown that handicapped children placed in regular classrooms tend to be rejected by their nonhandicapped peers (Bryan 1976; Jones 1978). Some reports of mainstreaming of handicapped children suggest that the nonhandicapped group may even become more negative toward the handicapped students as a result of mainstreaming (Bryan, Wheeler, Felcan, and Henek 1976). Thus, racial integration and mainstreaming of handicapped children may increase these children's sense of social isolation and rejection, unless specific efforts to facilitate their acceptance into the classroom are initiated....
>
> ...in order to provide opportunities for the facilitation of intergroup acceptance, schools must eliminate, as much as possible, institutional support of status distinctions between different groups.
>
> One particularly deleterious practice that maintains and supports unequal status is ability grouping (Schofield 1979). Research has consistently demonstrated the negative effects of grouping children according to their ability, yet many teachers and administrators continue to favor this practice (Wilson and Schmits 1978).

Howe /5 (71)/ believes that desegregation offers education a special opportunity:

> ...The process of desegregating shakes things up and offers the chance to rethink organization, curriculum, and other fundamental elements of the school's program. Where this opportunity is grasped imaginatively, there is research evidence that learning improves.
>
> All this suggests that we will have to spend the 1980s fashioning programs in every school to help teachers to be more successful with children. Such efforts can succeed. They depend upon learning how to take into account the beliefs, attitudes, and culture that children bring to school with them. They also depend upon working with children as individuals, maintaining high expectations in school for all the children there, building links between the school and the home, providing resources to help teachers with difficult problems, strengthening principals' skills as instructional leaders, and turning our energies in educational research from large-scale surveys of highly analyzed data to careful observation and illumination

> of the intimate business of teaching and learning that occurs between teacher and child.

Turning to another influence on the psychological climate, Ashton /43 (572-73)/ sees the "predominance of competitive and individualistic classrooms" as damaging to human development:

> ...In the competitive classroom, grades are indicators of the student's ranking in the group; for many students the incessant comparison with others on factors that are, for practical purposes like success in the world of work, irrelevant and insignificant, results in a loss of self-esteem and motivation. The individualistic classroom, a popular trend in recent years, wherein each child is working alone on material selected to meet specific needs, was designed to maximize individual achievement but often results in the sense of isolation criticized by Sanders. In an excellent review of the effect of competitive, cooperative, and individualistic classroom structures on students' development, Johnson and Johnson (1977) presented overwhelming evidence to demonstrate that "almost all instructional activities should take place within a cooperative goal structure" (p. 232). The research these reviewers discuss to support their conclusion is convincing. For example, Bryant (1977) studied the effects of cooperative, competitive, and individualistic learning environments on subsequent verbal self- and other-enhancement processes of 180 children, aged 8 to 10. From her study, she concluded that the individualistic learning situations reduced the likelihood of students relating verbally to their peers. Enhancement of the self at the expense of others was generalized from the competitive situation, and enhancement of oneself and others was learned in cooperative settings.
>
> The devastating ramifications of socializing the child into a competitive orientation are revealed in a study by Nelson and Kagan (1972). These researchers noted that middle SES U.S. children became increasingly competitive with age and persisted in competing even in situations in which it was inappropriate and self-defeating. In a review of a number of studies of competition, Nelson and Kagan observed:
>
>> Anglo-American children are not only irrationally competitive, they are almost sadistically rivalrous. Given a choice, Anglo-American children took toys away from their peers on 78 percent of the trials even when they could not keep the toys for themselves. Observing the success of their actions, some of the children gloated, 'Ha! Ha! Now you won't get a toy.' Rural Mexican

> children in the same situation were rivalrous only half as often as the Anglo-American child.

Physical Aspects

The physical environment can have an impact on the psychological climate as Wigginton /34 (419, 421)/ shows in giving illustrations to support his first principle in judging a school. This principle is that "every detail in the physical environment of a school, no matter how small, matters and contributes in a cumulative way to the overall tone":

> ...classrooms with desks (often covered with graffiti) bolted to the floor, bathrooms with doorless stalls, shared locker spaces, indifferent food served indifferently, raucous bell systems, intercoms used so inconsiderately that every activity in the school is shattered by full-volume announcements like, "Teachers, pardon the interruption, but Susan Jones' mother is here to take her to a dentist appointment"; all taking place within fortress-like institutional structures with endless cement block halls and bulldozed, paved surroundings devoted more to efficient crowd control and total lack of privacy (read "trouble") than anything else--all such elements conspire to create an atmosphere that is alien, dehumanizing, intimidating, and filled with an undercurrent of frustration.

Wigginton relates an unpleasant experience in a "small, windowless conference room that was almost womb-like in its isolation from the rest of the school environment" (420):

> Every time those students and I were in that room, their behavior was significantly different from their norm. It was almost as though they were lobotomized. Only through great effort were we able to break through that listless, unemotional trance and carry on some form of discussion. In a different environment--one with windows, space and air--they were completely different people. We all recognized the effect the conference room had on us, but none of us was able to pinpoint exactly what was happening there. Something to do with the combination of colors, windowless walls, isolation and the incessant buzzing of the flourescent lighting transformed us all in a noticeable way. Had I been assigned to that space for an entire quarter and not been able to observe those same five students in different environments, I might have assumed that both the course and the students were lost causes--an experiment not worth repeating. How many other teachers struggle with students daily and assume the problems they are having are due to the students, or

> themselves, and forget the impact of environment on behavior?

The school plant as a whole is an important part of the physical environment. Jones /2 (20-21)/ discusses the problem of remodeling inadequate buildings:

> In addition to programmatic needs, school districts will be faced with the problem of adapting school buildings to the environment of the eighties. These adjustments will more likely consist of remodeling existing buildings rather than new construction.
>
> Such remodeling will include the very obvious: renovating, maintaining, and updating older school buildings, some of which are located in decaying community areas, so that these buildings will serve to uplift the community and not contribute to community decay.
>
> In addition, in many urban school districts large numbers of school buildings were built more than 50 years ago in response to different educational needs. Renovations, then, for these buildings should proceed from the standpoint of providing adequate educational space for school children of the eighties by converting these spaces to meet new programming requirements, such as greater reliance on individualized instruction, the use of flexible media centers and systems, bilingual education, career and vocational education, and modern technology.
>
> School buildings also exist in that same energy-scarce environment in which other institutions must function. Substantial needs exist to operate these school buildings in a more energy-efficient manner, hopefully with greater reliance on renewable sources of energy such as solar systems. A conversion of plants, which were designed in an oil-rich era, to school buildings which are adequately insulated and which use energy-efficient equipment, requires considerable capital expenditures which many school districts do not possess.
>
> Further, the renovation of school buildings should stress flexibility of space. Shifting populations may result in the eventual conversion of school buildings to multipurpose community centers or perhaps even to shops and apartments. The aging of American society will generate new needs for educational programs and facilities which far surpass traditional utilization of public school buildings.
>
> Unless states and the Federal government can subsidize these substantial expenditures, many school districts will be faced with the dilemma of attempting...to cope with new needs with obsolete plants and equipment. Diverting resources from

> instructional purposes to meet these needs will reduce districts' ability to adapt instructional programs for the eighties.
>
> Meeting future needs of education is obviously not totally, or even primarily, dependent on adequate school buildings. However, school buildings which are inappropriately designed and maintained do form a certain parameter and constraint to any efforts to render education more responsive to instructional needs.

Little /27 (330-3)1/ discusses disposal of surplus school space:

> Legally, the responsibility for a surplus school may vary from district to district. The options open to local administrators are multiple, complex, and at times conflicting. Stable or declining enrollment can provide an opportunity to eliminate inefficient, badly located, or otherwise undesirable school buildings. A more complex situation, legally and financially, is the school that is partially underused, and from which conventional education probably should not be removed. Is it legal, plausible, and operationable to lease out a wing or a floor to other public or nonprofit agencies? How does one determine which users are compatible with a K-12 program? Another possibility is to lease the entire building to another public agency until future needs can be ascertained. This is a form of "mothballing."
>
> For those suburban schools in a reasonably good location but obviously experiencing declining enrollments, another, more speculative possibility exists. The school system may be able to sell the schools and land to a real estate developer who could take possession at an agreed upon future date. The school system would get an immediate infusion of cash and the developer would get a hedge against speculative land increases. Undoubtedly, there are numerous other possibilities or combinations of the above.

Forbis Jordan /20 (243)/ sees the possibility of "decentralized learning centers":

> Energy consumption associated with school operation and transportation, and continuing developments in communications technology, could well be the forces that change the manner in which schools are organized and conducted. With appropriate support and leadership, the concept of education in the 1980s could easily shift from the current emphasis on institutional "schooling" to an emphasis on learning and participation characterized by decentralized learning centers to which teachers move, rather than students, a three- or four-day week of formal

> instruction, work and service experience integrated into the planned educational program for students, and more extensive use of public television and video-recorders. Though suggesting numerous, inadequately explored problems, this combination of curricular and organizational reform supported by greater use of technology could contribute to a renewed interest in and a higher level of public support for education.

Resources in the Community at Large

No matter what decisions are made with respect to physical plant and locations where education will be delivered, to make full and creative uses of community resources in education for the 1980s will be more important than ever. In discussing certain imperatives for change, Goldhammer /1 (9-10)/ recommends both "greater congruence...of understanding and efforts to educate children between family and school" and greater use of "educational opportunities provided by the community at large." He continues:

> Remarkable efforts have been made in recent years to develop a science of experiential learning in which the instructional capabilities of the community far beyond the ability of school districts to pay for those resources has been achieved. The great value in experiential learning lies in the fact that it helps children become involved in the life of the community at the same time that they are gaining the knowledge and skills necessary for more effective participation. Experiential learning appears to be most effective in areas related to civic, aesthetic, avocational and vocational development.

Wigginton /34 (436, 439)/ also believes in experiential learning and recommends that "the school and the community should be as one":

> It has been shown through projects all over this country that experiential components can be built into every subject area of the curriculum, not in place of the academic aspects of the course or the basic skills, but as one of the few ways through which students master those skills and internalize them through having the chance to put them to work....
>
> Far more than simply using the community as a laboratory, or allowing the school facilities to be used by the community in the evenings and during vacations, students and teachers must be engaged directly with the community at large forging two-way relationships that not only educate, but endure and make a difference in the quality of life.

Cassen /48 (617-31)/ presents a fascinating case study of community service by students in a K-12 coeducational day and boarding school. His full report should be consulted for descriptions of arrangements made and successes and failures of various attempts by students to deliver their services.

Community service as an educative experience need not be restricted to school pupils. Botkin /40 (534)/ makes an interesting proposal for involving university students more directly in projects for improving their society. While he has in mind students in developing countries, the proposal might be applied in other nations as well, particularly in educating future teachers:

> Who, for example, in the developing countries is better placed than the universities to implement literacy programs? Could not the students be given credits equivalent to two semester courses if they make ten persons literate by the end of an academic year? Such programs need not, of course, be limited to literacy. They could apply to any of the areas such as environmental protection, preservation of the cultural heritage, water resources, health and sanitation, land conservation, and so on. While we recognize the need for universities to balance action with reflection, a majority of the world's 5,000 universities and 40 million university students have become too remote from the reality surrounding them.

Perrone /38 (490-91)/ urges attention to community settings of education:

> For too long, we have viewed schools almost exclusively as the center of our educational efforts on behalf of the young. Without denying the importance of schools, we need to acknowledge that there are many other important educative settings in our communities that may be far more influential educationally for many individuals: namely, homes, television, libraries, museums, parks, recreation centers, neighborhoods, banks, stores, churches, and the work place. We often concern ourselves with the quality of schools through official organizations such as boards of education or parent advisory councils but take less note of the quality of the out-of-school learning opportunities available to children and young people. These have deteriorated to a very large degree in many of our communities. Parks are not maintained, libraries and museums have restricted their hours, volunteer social service programs have declined from lack of attention, children are left alone more because parents are working and extended family units are less frequent, etc. The resources which exist in most of our communities--urban and rural--are large and to a very large degree untapped. To depend exclusively on

> teachers in schools for intentional learning is a limited view of education. How many individuals with outstanding preparation and experience in mathematics, engineering, medical sciences, business, or the technical and nontechnical vocations are available to children outside of school in any systematic activity? How many individuals who are practicing dancers, actors, painters, sculptors, musicians, artisans, crafts persons can one find currently involved with public school children? Questions of this sort are innumerable. Community education programs might be more broadly conceived to include school-community councils able to view education more broadly than schools, that seek to raise public concerns about the erosion of constructive out-of-school learning opportunities and engage all of the particular community's educational, institutional, and human resources to a reconstruction that can benefit children and young people.

Tyler /6 (86-88)/ agrees with Perrone's position that there is need for reconstruction of the out-of-school learning environment, but he stresses the value of a well-conceived total education environment with the school playing a key role in making educative uses of experiences in the community:

> The school furnishes opportunities to learn to read, write and compute, and to discover and use facts, principles and ideas that are more accurate, balanced and comprehensive than that provided in most homes, work places, or other social institutions. The school also supplements and complements learning furnished by other institutions and is usually an environment that represents the American social ideals more nearly than the larger society. In most schools, each student is respected as a human being without discrimination. The transactions in the classroom are guided by an attempt to be fair and to dispense justice, and the class morale is a reflection of the fact that the members care about the welfare of others.
>
> The school has an important role to play in the education of children and youth, but it is only a part of the system and most of us learned more in the home and the other institutions of the community than we did in the school. Now the educational activities of the home, the religious institutions, the youth service agencies, and the neighborhood gatherings are greatly changed.... Only the school is maintaining approximately the same role as in earlier periods with the same amount of time annually for its work with children and youth.... When the educational expectations of the public are not realized in the performance of youth, common opinion holds that the schools have failed, ignoring the erosion of the

nonschool part of the educational system.

The increasing educational requirements for persons living in our complex society cannot be met without rebuilding the total education environment for children and youth. Fortunately, most if not all local communities include a considerable proportion of persons who care about the future of our society and the education of our children. Provided with information about the local situation, these people can be mobilized to help in the rebuilding of the total educational system. This does not imply or require public operation and support of all out-of-school educational experiences. The American public is not likely to vote the taxes required to furnish professionals to guide the education of children and youth in the many hours when they are not in school. Furthermore, a monolithic structure of the total educational system is inappropriate for a democratic nation, particularly a multicultural one. Volunteer leaders can be secured, as has been demonstrated by out-of-school educational organizations like the 4-H Clubs, the Scouts, and the Junior Achievement Program.

Several surveys indicate that a large number of persons with knowledge and skills would like to teach them as a public service without remuneration. The strength and vitality of voluntary organizations have been frequently noted by foreign visitors. What is missing is the comprehensive identification of needs and authorized encouragement of those who could meet the needs.

Mass Media in the Environment

In examining present and potential uses of community resources, special attention must be given to the mass media. Pulliam, Kierstead, and Bowman /33 (400)/ discuss media values in relation to the future of education:

> Roles of older institutions (such as schools and families) involved in the process of learning and socialization are now being subsumed at least in part by the mass media. This raises the question of just how viable and effective attitudes and values advanced by the media may be for survival and optimum realization of the human potential.

The three writers (402-13) continue their discussion of the mass media by pointing out the pervasive influence of television:

> At present, there is a good deal of interest in the negative characteristics of some of the media, especially television. P.T.A. groups have expressed concern about the sex and violence viewed by children.

Educators are studying the relationship of viewing to reading ability, and the possible effects of the media on decline of ACT scores.... Educators must abandon critical ignorance and uncritical acceptance of the media in favor of serious study of the way media values permeate the culture and cast the shape of things to come....

Significant technological changes are expected to transform and intensify the future of the media. Video discs, cable TV with talkback provisions, home and box office movies and home computers connected to centralized memory banks are already having some impact. For today and the immediate future, however, it is reasonably safe to say that television is the most important medium. It is an invincible force in creating attitudes and a major means of transmitting the culture to the young. While it may be argued that the media tend to reflect the society more than they influence it, that does not reduce the educational problem. Networks are now using high level consultants to determine how effective television is as an instrument for teaching. Educators must also examine the media and find ways to change or promote the values the media transfer or create.

Studies are inconclusive about how television impacts the lives of young children....

It is known that American children view an average of 8,000 hours of television annually between the ages of three and five. This includes nearly 100,000 commercials. By the age of fifteen, most children in the United States will have spent more time with the "tube" than in the classroom. Sociologists point out that children in lower socioeconomic families view more television because they have fewer choices about how to use their time. No large group of children in America, however, is without exposure to television.

Reading experts and early childhood educators are not in agreement on how much television may affect preschoolers, but they agree it is a potent force....

The vocabulary of the average youngster has increased dramatically in quantity and sophistication compared to the pre-television period. On entering school, children generally have a much better appreciation of different cultural characteristics and a wider understanding of issues than ever before. Because of the global nature of the media, better concepts of geography and different patterns of living are also evident. As television continues to carry multicultural messages, it may improve race relations as it offers many models of manners, dress, and deportment.

On the negative side, the wider vocabulary and more diverse exposure are not matched by depth of knowledge. Children know a little about everything, but television has not encouraged them to probe or think deeply. This superficial sophistication takes out the surprise and first impact value teachers once got from introducing new "subjects." Children's television expert Roger Fransecky points out that the children consequently come into the classroom confused. Television makes no demands on them, but teachers expect them to listen and respond on cue. Intelligent students do not always respond well to traditional methods of teaching because they are accustomed to learning packaged with entertainment....

Of course, children consume television in different ways. No conclusion of the effect of mass media is sound without considering factors like age, the home environment, and differences in personality. Parents who do what the networks advertise and control what children watch can make a big difference, especially if there is conversation about the programs.... Viewing is especially harmful if it replaces reading, talking, play, and imagination in the life of the child. Television requires no interaction of the kind reading demands and imagination is limited by the myriad of continuous programs. Viewing does little to teach children how to share, cooperate, or play together. Lonely and isolated children may seek models from the tube that are of questionable value....

Packaged Values. Those concerns which have been expressed are significant, but they are not the most fundamental problems of the media age. Even more crucial is the overall impact of the media in supporting materialism, hedonism, keeping up with the Fonzies, and unchecked consumption of scarce resources. The mass media are dominated by commercial interests to the extent that future alternatives are very limited unless they call for growth and a continuation of what Veblen called "conspicuous consumption"....

It follows that any alteration of the system that might enhance future survival depends on some public influence over the media, to include advertising....

John McHale's work calls attention to the failure of the intellectual establishment to understand and use the mass media of communication. He sees a new planetary culture, the chief characteristics of which are accelerating technology, automation, and a multiplicity of new communication channels to accommodate vastly expanding levels of information.... McHale is optimistic about the ability of human beings to cope with and control technological change, but only if they can gain basic understanding of the forces which shape their world. He agrees with McLuhan that when the image on the tube replaces the word on paper, there may be a withering away of abstract thought and a replacement of logic with emotion....

Social Invention. There are abundant

> technological innovations in medicine, communications, agriculture, etc., but there are very few organizations involved in social innovation. The media have established themselves as one of the few vehicles of social innovation in the world. They influence appearance (clothing, hair styles), language, family (marriage, divorce, child care), politics, health (food, exercise), religion and status (to mention only a few areas). This is all accomplished under the pretense of entertainment (as distinguished from education) and a demand-supply theory which assumes that the public gets what it wants. The media, therefore, retain little responsibility for their product....
>
> Educational institutions...need a process for the analysis and creation of social innovations.... Schools should not blame their clients for values taught through a more powerful socializing (and social inventing) structure--the media. Educators can become change agents and help their clients to reconstruct their views of the world. This is a comprehensive proposal for the development of another source of social invention--the school. Educators are the least biased, most academically prepared sources for providing a check and balance on invention through the media. In *The Far Side of the Future* (Bowman et al. 1978), it was suggested that the introduction of "futures studies" into educational organization and curricula provides a broad-based, interdisciplinary process for analyzing and creating change. This is needed as it relates to the media as well as other agencies involved in technological invention.

Uses of Technology

The preceding excerpts from Pulliam, Kirstead, and Bowman may serve as an appropriate introduction to consideration of uses of technology in the school environment.

Perrone /38 (503)/ comments that, beyond broadcast activity, "the in-school use of television as a learning tool is virtually untapped." Botkin /40 (532, 534)/ thinks that television has failed to enhance innovative learning, but he believes that efforts should be made to devise programs that will encourage such learning throughout the world:

> Filled with technological possibilities for learning heretofore unimagined, the benefits of the telectronics revolution will be lost if we fail to seize these fleeting chances to harness such technologies for constructive innovative purposes....
>
> Every effort should be made to prepare for the extraordinary communications and man-machine dialogue

> which developments in "telematiques" and "telectronics" are bringing. At least a third or more of efforts in this field should be devoted to educational programs that encourage innovative learning and more specifically, integrative and holistic thinking. An ombudsman should monitor for a sufficient number and quality of programs appropriate to each given country.

Phillips /18 (220-21)/ deals with the possible effects on education of the "literal explosion in the field of electronic technology in the last decade":

> A cursory view of the potential for electronic technology in public education triggers a number of fascinating possibilites. Realizing the tremendous capability of computers to handle information quickly and accurately, the possibilities of individualizing learning and instruction seem within our grasp. Instant feedback on the learning progress of students would enable teachers to determine what has or has not been learned, to diagnose learning deficiencies, and to prescribe individual learning programs to remove those deficiencies. The computer's information-handling capabilities could provide printouts to parents on a timely basis describing students' learning progress and, in addition, could provide suggestions regarding the kinds of help that might be provided in the home by parents. The advances in electronic technology would enable schools to monitor on a continuing basis the learning progress of each student, thereby enhancing maximum development of the learning potential of every student.
>
> Another possible application of electronic technology to public schools is the expansion of instructional materials required in the teaching/learning processes. Although still in its developmental and shakedown phase, the use of satellites, telecommunications, and computer reader-printers could provide schools with access to the books, films, and other visual materials housed in our great libraries and archives. These resources could be drawn upon whenever a particular lesson required their use. This application could put the informational resource materials of the nation at the fingertip of any teacher and student in any public school.
>
> Electronic technology could help educators at all levels of public education to deal more effectively with the data needed in day-to-day operations of schools. Areas of potential application and further development are the completion and updating of myriad reports; the keeping of records upon which funds are allotted; maintaining and controlling inventories; maintaining payrolls, personnel, and student files;

> effectively using achievement data; scheduling classes and buses; monitoring and controlling energy consumption in schools; and conducting meetings via telecommunications hook-ups with education associates and organizations on a local, state, and national scale. This is not an exhaustive list by any means, but one which identifies some of the areas that need to be investigated and developed for use in the public schools in the '80s.

Buchen /32 (387-88)/ argues that as far as technology is concerned, "the beast is here to stay":

> ...curiously the more one accepts and understands the monster the more benevolent it seems.... what is clearly needed is the creation of a new category of technological literacy as minimum knowledge required to be a reasonably educated or civilized human being. In fact, never before has the knowledge of machines been such an important condition for the knowledge of being human.

Buchen adds a footnote:

> One of the unappreciated ironies missed by most humanists about technology is that often when the technology is refined, far from dehumanizing individuals, it makes it really possible to treat them as individuals. Thus, data processing has now reached the exquisite delivery point where it is no longer a mass annihilator but a one-on-one caterer.... The notion that technology, communications or otherwise, is always perceived as a controlling probe of the monster state or a money-making tool of the corporate state precludes the crucial recognition that as our size increases, and the numbers of people go up, and complexities are layered, the only way the individual may in fact remain an individual is through technology which has come full circle: now that it has centralized much, it can begin the process of decentralization as well.

Wegmann /23 (285-86)/ deals with the issue of "computer usage in the instructional process itself":

> The problem is not hardware, but software. The cost of memory and calculation devices has already been lowered so dramatically that there is no question that schools can provide almost any instructional program they wish at reasonable cost in terms of equipment....
>
> The software--the computer program that sequences what the computer does next--...is relatively straightforward. These units work well for simple drill, particularly for students who learn quickly and

> give right answers more often than not. Serious group instruction by computer, however, would require far more complex programs than now exist. The reason, at root, is simple: such programs, to be truly responsive to a wide variety of students, must react appropriately to a very large set of possible wrong answers. That is, as students sit at the console and work arithmetic problems or try to spell words or insert grammatically correct verbs in sentences, effective instruction requires that the computer not only be able to point out that a given answer is incorrect, but also to react to what the student is doing wrong and provide some kind of help so that the error is not repeated. The more difficult the work, the larger the number of possible errors that can be made. This, then, involves very complex "branching" instructions to handle a wide variety of combinations of errors and ways to correct them. The computer program involved becomes extraordinarily complex. All attempts to utilize computers for instruction thus far have foundered on this problem.
>
> On the other hand, should someone come up with a significant programming breakthrough, the whole situation could change. Once a computer program is finally written, it can be mass-produced at very little cost and used repeatedly at multiple sites. Should even one ingenious simulation game or program for computer-assisted instruction (CAI) lead to significant gains in achievement in some area of basic instruction, the resulting publicity would lead to pressure for its quick adoption nationwide....
>
> Depending on how extensive such usage became, the entire process could involve significant changes in the role of teachers, new physical layouts in the schools, individualization of instruction, and a reconsideration of the wisdom of grouping by age. All of this may or may not occur, but given the existence of low-cost hardware, there is considerable potential for a software breakthrough which could leave behind schools that were unaware of all of CAI's ultimate implications.

Anrig /19 (232)/ issues a caution relating to "software":

> We need to learn...from the experience of the 1960s with Federal funding of computer-assisted instruction, teaching machines, and instructional television. Much greater support needs to be given to the quality of instructional programming for technology, the "software." Much greater effort must be given to training and assisting teachers in the use of technological aids. Much greater attention should be directed to the curriculum and scheduling needs of individual schools and classrooms. The new technology

> makes it possible to avoid difficult and costly mistakes of the past, but it does not guarantee good judgment. This is left to the policymakers.

Baker /45 (596-98)/ predicts that "technology, as applied to technical services and instructional programs, will become indispensable in the school library media program":

> ...Especially in the technical service area of library media program management will technology assert its usefulness. As a national bibliographic control system is brought finally to both the audiovisual and print world, access to computerized data bases of cataloging and bibliographic information, as well as the production of cataloging cards and book catalogs, will become commonplace in the school library media program. This alone will free professionals from countless hours of unnecessary and usually ineffective labor as they catalog and process the mountains of instructional materials necessary to the library media program....
>
> Computer access to other information data bases will allow library media specialists to avoid much of the essential but time-consuming reference questions of the "where-do-I-find" or "in-what-book?" nature, questions which are so much a part of the day but whose repetitiveness and low learning value impair the efficiency and effectiveness of many school library media programs. Quick and easy reference questions and information needs such as information retrieval skills may be stored in a data base, called up by the user and used as often as needed, much as we now sort through the card catalog or encyclopedia to find this or that piece of isolated information.
>
> On a more sophisticated instructional level, growing access to and use of commercial information data bases will accelerate within schools, and new and highly useful computerized data bases for elementary and middle school users will be developed....
>
> Technology as used within the library media program's instructional program component will become abundantly available too, through a vastly increased commitment by all kinds of libraries to the practice of networking or resource sharing. On the one hand, the application of technology to media programs will lower their per pupil cost, making available vast treasure houses of information at significantly reduced costs. On the other hand, large capital investment is required to obtain the hardware and the programs created by advanced technology, even though this expense has decreased in cost or held steady as miniaturized components made possible through solid state circuitry have reduced bulk while increasing efficiency and information delivery. Access to this world of the

> future is expensive. Programs created through regional associations or cooperative service compacts among various kinds of library and information systems will serve a dual purpose; by pooling human and material resources and sharing financial investment and risks, information services will be made available which no single school or building could heretofore have afforded. Networking means, too, that complementary information programs consisting of public, special, college, and research and any other kinds of libraries and information agencies now operating will increasingly transcend the bonds of service to an exclusive client group and provide services and programs to a greatly expanded population.

Baker (598) goes on to discuss making technological services available to a wider group of clients:

> Well established by now, too, is that the numbers of the traditional clients for school library media programs, children in the five- to eighteen-year old range, have diminished precipitously and this will continue into the coming decade.... Preschool and day-care programs, senior citizen education programs and special interest groups concerned about such matters as health care, nutrition and leisure time learning will be recruited into using community schools.... The educational system's responsibility to attend to the educational needs of widely varied multitudes of citizens with different needs and expectations is increasingly defined through judicial, executive, and legislative fiat, and it mirrors as well a genuine commitment by the educational system to play its essential and historic role within the democratic system.... What will happen is that materials, equipment and personnel will be used in a number of ways and with a variety of disparate users with special individual group needs.

The writers in this section deal with an environment composed of people and things, especially those new technical means of delivering educational content to clients. Matters of space have been touched upon also, but a fourth dimension of the environment, time, is overlooked.

AREAS NEEDING SPECIAL ATTENTION

Several authors address themselves to the special problems of segments of the population not always in the center of attention. These individuals include the first Americans, migrant workers, those living in rural communities, young adolescents to be found variously in elementary schools, middle schools, or junior high schools, and the gifted and talented.

Education of American Indians

Tonemah /50/ and Deloria /51/ both trace developments in the education of American Indians and show present needs. Tonemah (646-47) writes:

> Over the past 200 years, the various educational efforts applied to American Indians have been aimed at making us like a counterpart of the larger American society. Little or no consideration has been given to the cultures of the indigenous people of this land. Although there has been a recognition of the "unique" status of the American Indian by the Federal government, this unique status has not recognized the necessity to preserve the cultures of the tribes. New legislation developed in the 1980s could address this issue. Granted, the argument that cultural retention is best promulgated by the tribes is well taken; however, many tribes are still groping for the basic essentials of life (food, clothing, health, housing, etc.) and do not have the resources to invest in cultural retention efforts. The traditional methods of transmitting the culture from elder to younger have been obstructed by programs which separate and diffuse this system....
>
> I suggest that, in order for Indian people to be able to achieve both in an Indian and non-Indian world, the "basics" provided for them must be suited to meet their goals and objectives as identified by them. These basics may include...programs which promote tribal self-sufficiency.
>
> ...education for American Indians has focused on compensatory education, attempting to bring the whole of Indian education to a par level with the larger American society. I suggest that this effort continue in addition to expanding to include new areas such as: gifted and talented; computer education; handicapped education; diversity in vocational programs; adult education; and directed research/dissemination.

Deloria (654-56) adds:

> ...education, if it is to be relevant to American Indians, must return in both content and substance to Indian traditions.... The content of education is generally a function of the type of teaching techniques used and so when we talk of returning education to the local community we are really talking about the discarding of modern administrative procedures and teaching-learning theories in favor of more spontaneous and community-related activities.

> In practical terms this type of education would reduce the administrative role to an absolute minimum in favor of a greatly expanded teaching staff dealing with an increasingly smaller class of students in increasingly specific subjects of instruction. The traditional Indian teaching format approaches the tutorial in its specificity, enabling both student and teacher to share a particular learning-teaching activity and dealing specifically with the knowledge and experiences of the world in which the teacher has lived and in which the student expects to live. The content of this kind of education emphasizes how to live in the world and what it means to be a human personality within a social-political context....
>
> Reduction of the administrative function of school systems in favor of the teaching component is a relatively simple task that requires only the formalization of teacher-aides and other paraprofessional personnel as an integral part of the school system and a downgrading of the mania for keeping records, counseling, and administering intelligence and personality tests--all functions which are presently badly handled in Indian and non-Indian schools alike. Obviously, this movement also means a phase-out of certain kinds of consolidated schools and an emphasis on increasingly smaller schools at the local level. Present gigantic buildings may continue to perform some useful community function, but they should no longer be viewed as educational centers.
>
> A significantly paced reduction in consolidated schools in favor of much smaller local schools would almost immediately solve the problem of parent involvement. It would reduce the need for institutional disciplinary activity since parents and community would once again be able to exercise this function. Reduction would allow community-introduced variations in schools to adapt the process of education to the uniqueness of the local people.... Today the decline of test scores and the rise in dropout rates is directly related to the onset of adolescence and the awareness of the complexity of personality. Most of the tribes recognized this particular life crisis and provided for it through ceremonials. These ceremonials should be made part of the educational experience even if it means that children of this age will not formally attend school for a year while they are instructed in traditional customs and beliefs and made a part of the adult community. But the life crisis will be resolved in an Indian manner that will assist in resolving many of the pressing problems suffered by today's reservation communities.

Education of Migrant Children

Of the predicament of migrant children, Jordan /53 (675-79)/ writes forcefully:

> For a variety of reasons there is simply not a clear hierarchy of rank, authority, or responsibility among educational jurisdictions {local, state, Federal}, but neither is there a genuine partnership of levels.
>
> One group of children has been more systematically short-changed by this chain of noncommand than any other: the children of migrant farmworkers. The fact that they were the most educationally deprived children in the nation prompted Congress, in 1966, to amend Title I of the Elementary and Secondary Education Act to mandate programs and projects directed specifically at meeting the special educational needs of these children.
>
> It is 1980 now, and educational achievement is still tragically low among migrant children. How can this be changed? One way, most parents and advocates are convinced, is through increased parent involvement.... Yet real parent involvement in migrant education programs is still almost nonexistent. Why?
>
> The answer lies partly with migrancy itself: Employment for migrant farmworkers is, by definition, seasonal and temporary in nature. A family with a home base in Texas may be in Michigan or Wisconsin for the last six weeks of school. Or a family based in Florida may be based in New York or North Carolina for the first two months of the school year.
>
> The migrant child frequently faces an enormous disparity between the school setting and the home setting, and between school language and home language....
>
> Migrant families are politically isolated, without moorings in a society that enfranchises its citizens through their place of residence, and in a society that often looks at migrancy with cultural disdain. Most migrants are truly stateless and cannot receive or exercise the political rights that other Americans take for granted.
>
> Additionally, most migrant adults have had only four to six years of total schooling and many do not speak English. They are likely to be unfamiliar and uncomfortable with the school and with school administrators and teachers, their own school experiences having been hostile and unrewarding. Many believe that they will be treated with contempt by the school, that they will not be able to communicate with school personnel, or that any questions they ask or demands they make will result in reprisals against their children.

> But these factors do not constitute excuses for not involving parents; rather, they should be an incentive for officials to redouble efforts to facilitate parental involvement. It is, in fact, a challenge to government officials at all levels.... The Federal response to parent and advocate demands for increased parent involvement has always been to explain that the mobility of the parents is a "complicating factor" in the effort to involve them. Parents and advocates are compelled to continue stressing that mobility is not a factor in migrancy, it *is* migrancy. It is the *sole* definitional cause of the need for special services: These children have been unable to get quality education because they have been mobile.
>
> In defining the problems and issues of migrancy, it becomes clear that *getting* involved is not just a parent responsibility. Migrant farmworkers have not been injected with instant knowledge of Subpart 1, Part B, Title I of Public Law 95-561. They must be told about the law, about the programs, what their children's participation can mean, what their own participation can mean to their children, and some logistical details of how to participate.
>
> Presenting this information is a primary local responsibility, and presenting it well will bring parents into the local project. Modest support efforts on the part of the school, presented with openness and respect, will keep parents there. The school responsibilities being filled, it then becomes a parent responsibility to *stay* involved.

In a paper on migrant education prepared for the National Council of La Raza, Cortes, Barcelo, and Schroyer /52 (663-73)/ plead for concentration on the unique educational needs of children of migrant agricultural farm workers and urge:

1. Involvement of migrant parents themselves in the planning, execution, and evaluation of programs pertaining to their children.
2. More trained bilingual education teachers in the Title I Migrant Education Program so that they can work directly with the children rather than depending on aides to act as translators.
3. A national strategy to meet the special educational needs of migrant children of limited English proficiency.
4. More coordination and unification of services between the Title I preschool program and the Migrant Head Start program.
5. Better coordination of local, state, and Federal programs.
6. Cessation of biased testing measures to determine educational status and future opportunities of migrant children.
7. Provision of educational opportunities to children of undocumented workers.
8. Utilization of community-based organizations in order to ensure that migrant children are offered the benefits of the most effective educational administration available.

Education in Rural Communities

The writing on education in rural communities shows that this part of the educational spectrum has in common with American Indians and migrants the need for arrangements suited to their unique circumstances. Sher /16 (200-01)/ reports a resurgence of interest in rural education:

> Tired of being treated like "just another bum from the neighborhood," the rural side of American education is training hard for a shot at restoring rural concerns to their rightful prominence on the local, state, national (and even international) policy agendas for the next decade. The first surprise is that this rural challenge is happening at all. The second surprise is that it's likely to succeed....
>
> ...the "substantive case" for taking rural education seriously is a solid and compelling one. The foundation of this case is built upon the (surprising) size of the rural sector, i.e., the fact that approximately two-thirds of the nation's public school districts, and one-half of the public schools, and one-third of the public school students are rural ones. Add to this base the statistics which show that since 1972 the old rural to urban migration trends have reversed (with more and more people now moving into rural areas)--and it becomes obvious that the rural education constituency will be a substantial one for many years to come.
>
> Yet, it should be clearly understood that the case for rural education is by no means a strictly numerical one. Whether viewed from the perspective of the magnitude of problems to be solved or the extent to which educational excellence can be fostered among the nation's rural schools, the recent research evidence makes it clear that this sector of American education merits far more attention and resources than has been accorded to it in recent years.
>
> Complementing the substantive case is the happy coincidence that, politically, the rural education movement is both well-timed and in harmony with other important trends not only within the profession but also within the society as a whole. For example, the trends toward more balanced economic and population growth, toward increased rural community organizing in favor of rural schools and toward a heightened awareness and support for cultural diversity (as well as trends away from the "one best system" and "bigger is better" models of education reform) all reinforce the political support engendered to date through the rural education movement.

Parks /29 (355-62)/ gives additional facts, figures, and conditions relating to the rural population of this country:

> Almost one rural school-aged child in twenty is poor. Forty percent of all U.S. poverty is in rural places, and the chances of falling below the poverty line are reputedly 2-1/2 times greater for a rural person than for a metropolitan person. In nonmetro America, the median income was $11,600, compared with $14,910 in metropolitan America in 1975. For rural minorities, the economic situation is more severe: They are the poorest of the poor, the least educated, the least able to find full-time employment, and generally the most vulnerable to shortages and setbacks. Rural children tend to enter school later than others, and leave school earlier. They are least likely to enroll in postsecondary institutions or specialized vocational programs, and they have access to fewer educational services and offerings than do metropolitan students.
>
> But there is no such thing as a typical rural person or a typical rural community, a fact that should challenge policymakers to create imaginative and flexible programs and policies, so that rural schools may adapt them to fit local conditions. Unlike his or her popular image, the country dweller is not usually a full-time farmer or rancher; that category includes only five percent of the rural population. The country man or woman may mine coal; cut and haul timber; work for the Forest Service; fish; pick crab meat; pack apples or salmon; drive a school bus; or weave cotton all day, commute eighty miles round trip, and keep a small truck farm on the side. The terrain may or may not be fertile flat farmland or miles of rangeland dotted with Texas Longhorns or Black Angus. It may be the Rocky Mountains, the Alaska range, or the Blue Ridge Mountains. It may be an island off the coast of Maine, South Carolina, or Maryland. It may be an American Indian reservation in New Mexico or Florida. It may be an Eskimo village that is closer to Siberia than to its own state capital, or it may be a Delta community of former tenant farmers who have no jobs because of farm mechanization. The rural community may consist entirely of Appalachian whites, Southern blacks, Aleuts, Navajos, or Hispanics; it may be racially mixed. In other words, the multiple cultures that make up the nation are all represented in the countryside. It is sometimes affluent and comfortable, although that is not usually so. It may have nothing "worse" to contend with than a small, sparse population--not quite poor, but almost--and a proud New England tradition of resisting both help and interference from outsiders; or it may be so desperately poor that it resembles a developing country

far more than it resembles Kankakee or Bar Harbor. Rural people often live in trailers and small FHA-financed homes. Some continue to live in tumble-down shacks lacking running water or windowpanes.

Whatever its special character, a rural community is likely not to have benefitted as a rural community from changes that enhanced the material well-being of city dwellers and suburbanites during the greater part of this century. Those things required for advanced forms of industrialization--now acknowledged to be less than entirely desirable--are those things that vary inversely with the character of rural life. For rural America the greatest negative consequence of modernization was the loss of wealth and people....

During the period 1929-1969, opportunities for rural youths were provided through a procedure that guaranteed the decline of many communities: exodus, taken as an almost inevitable accompaniment to the "natural law" of progress. When America was in the process of becoming the world's first industrial power, it required both concentrations of people in cities (where factories were located) and a workforce that had been trained (i.e., "educated") to work for someone else in a hierarchical organization.

Of the two consequences for rural America, one has already been mentioned: The drain of wealth and talent, as the most energetic, best educated rural youth were most likely to follow the "up and out" model of seeking opportunities where opportunities were to be found--in this case, "elsewhere," as Sinclair Lewis knew quite well. The other consequence was equally devastating for numerous rural places, if not more so in the long run: the transformation of schools into organizations that were structurally the antithesis of small town and rural organizations. One thing fed on another....

...factories require a workforce able to endure long periods of boredom, to take orders without questioning their merit, to relate to authority structures more than to the natural complexity of people qua people, and to function in a narrowly defined role. Small communities require the opposite. To the degree that small places thrive--or simply endure--they contain "critical masses" of individuals who can assume multiple roles, feel a sense of familiarity with a variety of human types and ages, find innovative ways to tackle problems and arrange services, and be more entrepreneurial than bureaucratic in outlook. Thus, when schools come to resemble the bureaucracies of a mass society more than they resemble the places in which they are physically situated, the chances for alienation of young people from their origins are substantial....

One reason for country peoples' strong resistance

> to school consolidation is that they have not wanted to lose a--sometimes *the*--central community institution. Lacking the array of institutions for art, adult learning, sport, and civic events that cities have, rural communities have used their schools for all of the above. Schools have also been "meeting houses" where young meet old, where parents meet teachers and principals (and are often one and the same), and where business people, farmers, and preachers can swap concerns about the community's health and well-being. Without community schools, the chances for these meetings are reduced, and with those missed meetings go opportunities for young people to grow up knowing the people who represent the economic and social institutions of their community.
>
> If they should return--and indeed where they still exist--community schools acting in isolation are unlikely to have the efficacy that they had before World War II.... The question for rural education is: Can rural schools use the old basic rural model but modify it so that it meets current needs and contributes to both the individual student's best interests *and* rural community development? Present evidence--though sparse and scattered--indicates that the answer is yes. Not only can it happen; in some rural communities, *it is happening*....
>
> Most of these efforts have explicitly or implicitly acknowledged (1) that local life has value for both learning (curriculum) and living; and (2) that rural students need, more than almost anything else, to learn entrepreneurship....
>
> {Parks observes that these efforts have} a remarkable congruence with some of the latest social science wisdom about coping with future scarcity and seems entirely in tune with a sentiment that staff members at the National Rural Center hear being played over and over again as they travel throughout rural America: self-reliance, local initiative, collaboration, tradition, small *can* be beautiful.

Schooling for Young Adolescents

Lipsitz /44 (584-90)/ addresses herself to intermediate schooling, declaring that schooling for young adolescents is the "weakest link in the chain of public education":

> We are desperately in need of priority setting, research, program definition, and funding for this age group.
>
> Where do young adolescents go to school? These 12- to 15- or 10- to 15-year-olds are placed predominantly in junior high schools but increasingly in middle schools....

There is no consensus about where young adolescents should be in school, much less about what the schools should be doing. It is an age group waiting for social attention....

It is incumbent upon us to make sure we are looking at every pressing educational issue as it impinges on this age group. For instance, the great majority of studies on school desegregation, effective school reading programs, programs for the handicapped, and teacher characteristics ignore or gloss over the middle grades, despite the fact that we cannot assume that what works at the elementary or senior high levels is effective in schools for young adolescents. In the 1980s we will have to examine the impact of each of these issues on intermediate schooling.

Does it matter what we do? In fact, we know very little, but what we do know gives us some hints. For instance, the National Institute of Education's Safe School Study (1978) tells us that boys in the seventh grade are the most victimized of our students--if they are in junior high schools (7-9), but not in K-8 or middle schools. Eighty-one percent of 7th graders in K-8 schools, in a controlled longitudinal study, participated in extracurricular activities; 39 percent of 7th graders did in 7-9 schools, despite the greater number of activities offered (Blyth, Simmons, and Bush 1978). A large urban study found that 12-year-olds who had entered junior high school had lower self-esteem, higher self-consciousness, and greater instability of self-image than 12-year-olds in elementary school. The transition into junior high school is apparently more stressful than other school transitions are (Simmons, Rosenberg, and Rosenberg 1973). There are other studies that indicate different effects for whites and blacks, and for girls and boys. A good deal more study is needed before this information will be of much use to policy-setters.

With rates of pregnancy, suicide, serious crimes, running away, truancy, and alcohol abuse increasing among this age group, we have indication of considerable distress among approximately 20 percent of this age group. We do not know what role school structure plays in this distress (although in some parts of the country, the crime rate goes down during the summer months and up during the school months), nor do we know which alternative structures will relieve some of this expensive human suffering.... Unfortunately, we have very few alternatives at the intermediate level. As a result, we offer very little respite to young adolescents who need different school environments....

At the same time, we must insist upon the normalcy of early adolescence. The onset of puberty, with all its attending physical and behavioral changes, is all too often seen as a pathological time in life during which adults feel that all they can do is wait it out. In fact, for the large majority this is not a time of crisis and tumultuous acting out. By assuming that it is and putting young adolescents "on hold," we fail to define what makes sense for them just at the point in their lives when they are actively seeking definition from adults. While we must be concerned about establishing alternatives to traditional schooling for the 20 percent or so who are distressed, we must also be concerned about establishing a spectrum of educational opportunities for the approximately 80 percent who are coping adequately....

In the 1980s we will need to...spend a greater amount of our human and financial resources on socializing and educating the young adolescents in our schools.

Young adolescents pose a unique problem for educators. The central characteristic of this age group is its diversity, caused by extreme variations in the rates of physical, social, emotional, and intellectual development. There is no age group that is as variable in the entire continuum of schooling. John Money (1974) has pointed out that "it is very difficult for some youngsters to be caught in that no-man's land between their chronological age and their physique age, trying to keep up their social age, their academic age, their personality age, and their psychosexual age, in conformity with their chronological age." It is also very difficult to be a teacher of 25 or 45 such students, each juggling so many different and varying ages, especially since variability occurs both within each individual and among the many individuals in the class. Certainly it is also very difficult to administer a school for this age group or to be on a school board setting policy for such a school. If for no other reason than the fact of this unique variability, intermediate schooling is in need of our targeted attention....

What makes a school effective in not just desegregating but in integrating its student body? There are several studies that present us with disturbing preliminary data about the difficulties of integration at the junior high school level. We need more help from studies like Classrooms and Corridors: The Crisis of Authority in Desegregated Secondary Schools (Metz 1978), which analyzes the strikingly different life in two desegregated junior high schools, one that is in chaos and the other where students learn peacefully in a well-administered setting with teachers whose morale is high.

To be effective, a school must establish a climate in which children can learn. As concern about school safety grows, especially at the junior high level, we need to examine not just troubled schools, but, even more importantly, orderly schools. Orderly Schools That Serve Children (Kaeser 1979), a report from the Citizens Council for Ohio Schools, is a first step in the right direction.

Study after study has told us that effective schools are marked by strong administrative leadership. We do not have as talented a pool of administrators at the middle grade level as we do at other levels. If we are going to strengthen the weakest link, we will need a new form of Educational Professional Development Assistance (EPDA), this time one that focuses strongly on middle grade administrators and staff.

There are curricular issues that must be resolved in relation to intermediate schooling. They have their origin in developmental phenomena at early adolescence. These areas include reading, health education, vocational education, and career education. One example, and an extremely important one, has to do with mathematics and science.

For some students the decision not to continue taking mathematics occurs as early as seventh grade, when eighth grade algebra becomes optional. This decision carries serious negative consequences, since the "mathematics filter" prevents these students from getting later learning in technical fields. All fields entailing the use of mathematics, including those relying on computer technology, are closed to these young people because of a decision made during early adolescence. The problem is especially acute among women and minorities.

Education of the Gifted and Talented

Education for the most gifted and talented students has moved in and out of the center of attention in the public schools since the 1930s. The 70s saw the latest upsurge of interest in such students. Gallagher /49 (634-38)/ writes of the current status of education of this portion of the student population, comparing it with the more generous provision for the education of the handicapped:

> John Gardner (1961) asked two decades ago whether we can be equal and excellent, too, and we are still struggling to answer that question....
>
> The history of support for programs for exceptional children in the U.S. Office of Education gives us some insight into the cultural problems of the gifted and talented in our society. The Federal government provided over $900 million in fiscal year 1979 to improve the education of school-aged handicapped children. These dollars are certainly needed; in fact, they do not provide all that

> handicapped children need in the way of special education services. But during that same year, the Federal government provided only slightly over $3 million for gifted and talented children. In short, for every dollar spent on a gifted child for special education, $100 is spent on a handicapped child.
>
> Are these appropriate expenditure proportions for exceptional children in our society? Probably not. It does reflect the political realities that attend our present system of crisis decisionmaking in government. Gifted children suffer because they are a "cool" or long-range problem. Budget and legislative decisions are made not on the basis of what might be of ultimate benefit to society but on what is the greatest immediate crisis. Gifted children may be our best long-range investment in education, but they do not create problems of immediate significance; nor have they had a vocal constituency capable of extracting attention and dollars from public policymakers....
>
> One of the substantial changes that the Federal legislation did bring about was a new definition which broadened our concept of gifted beyond the academic to include the performing arts, creativity, and leadership.
>
> It also encouraged a search for minority group gifted students, often overlooked by traditional screening methods. Both of these trends furthered the attempt to democratize the gifted and recognize that many gifts can be found at all levels and walks of our society.

EDUCATION AS A LIFELONG PROCESS

Several writers stress the need for planning education as a lifelong process. Goldhammer /1 (11-12)/ gives reasons for attention to lifelong education:

> Too much of the concern for lifelong education has been the continuing education perspective which has placed emphasis upon the taking of courses for credit rather than adapting learning activities to the life changes of our citizenry. With the increasing age of our population and the acceleration of technological changes, new demands are placed upon the population for making changes in perspective and acquiring new skills and understandings to maintain their ability to earn a living and to maintain a healthy perspective on their life and roles in society. Preparation for new vocational endeavors, building better understanding of current changes in living, understanding the nature of the nation's responsibilities within the family of nations, developing an understanding of the

> multiethnicity of American society, understanding and being able to participate in the arts, religion, recreational and vocational activities which are building health in body and mind in preparation for retirement so as to maintain human fulfillment during those difficult periods of life--all are the functions of lifelong education...

Sanders /47 (613-15)/challenges our society to provide educational opportunity for neglected groups of persons at various points in the life span:

> ...We need to give some immediate attention to the night people, the drop-ins, the young adults, the diaper crowd, and the mid-lifers.
>
> We should staff and operate our schools twenty-four hours a day.... Many parents work shifts, thousands work night jobs. A recent poll showed that 13,000,000 people listen to one midwestern radio station almost every night between 12 a.m. and 6 a.m.
>
> These night people have night children....Who takes care of these children at night? There are no night-care centers for these parents to turn to....
>
> With the kind of technology we have for the '80s, these children could be shift-scheduled to fit their parents' schedules and vacation time. This would allow parents and students more time together and relieve a lot of anxiety about the care of the children. Teachers would find fewer heads on desks during the traditional 8 to 3 school day. The school buildings would be better utilized and the taxpayer dollars better spent.
>
> When I refer to the drop-ins, I am talking about the thirteen-, fourteen-, and fifteen-year-old students who want and/or need to leave school to get a job. They should be allowed to do this without the stigma of being called a dropout. Here again, if we had schools operating on three shifts, these kids could drop-in to a school shift that would allow them to complete their education. They might even stay out a year or two before they drop back in. There are no reasons, other than arbitrary ones, that say all children should have completed their secondary education by the time they are eighteen or nineteen. The kids of the '80s will live to be a hundred and twenty years old. Why do they have to go through the paces originally designed for people with a life expectancy of 45?
>
> Some of these drop-ins might be employed and paid by the school system. As we think of creative ways to employ the youth of our country, we might even consider a paid internship for the majority of these children when they perform roles such as cross-age tutors, recreation leaders, basic skills instructors, secretaries, child-care helpers, etc. for the

> professional teaching staff. This would be an excellent way to train students to get along with all types of people in an authority position in a work situation.
>
> There are many young adults who need and would like to go back to school.... They need to go back to a secondary situation, without the stigma of being "too old" to get the training they need to have gainful employment.
>
> Speaking of young adults brings us to the "diaper crowd." Schools should have facilities and programs for these infants. The parents and infants could attend the same school during the same shift....
>
> The mid-lifers should also have a lot of consideration in our dream for universal elementary-secondary education in this country. Just because you have spent your entire working life in one profession does not mean you should be doomed to continue that role for the rest of your life or the current alternative of forty years as an unemployed senior citizen. These people should have the options available to make changes. They should have opportunities provided by the school systems to go in for counseling, exploration, problem-solving analysis of their current skills, individualized programs for retraining or recycling for new types of jobs.

Jordan /20 (235-36)/ makes predictions about support of programs ranging from preschool to noncollegiate postsecondary:

> There appears to be general agreement that support for preschool programs should be provided through general revenues. However, for various noncollegiate postsecondary programs, some observers would differentiate between the consumer programs that are essentially avocational for the individual and the job training programs that are designed to assist the person in securing employment or upgrading employment status. Some observers of avocational programs would contend that the student should pay all or some of the cost. For job training programs, support can be found for society, e.g., the taxpayer, assuming a major share of the cost of the program. The rationale has been that society benefits because of the increased earning power of the persons in the program. The educational system will be challenged to respond to these additional program options during a period of competition for scarce resources.

Kiernan /11 (147)/ anticipates a replacement of schools for children and youth with "education/community centers" suited to all age levels:

> ...on the question of reshaping American education I believe we must develop a multilevel structure similar to what Japan has done. In their reorganization there are schools for childhood, the adolescent years, higher education, and continuing education for all adults. With an aging population schools should no longer be regarded as single-purpose institutions for children and youth.... We need schools for people--not just pupils. I would anticipate that the eighties will witness impressive growth in the education/community centers. Many school buildings no longer in use can be adapted for such programs and schedules established for the full day and evening throughout the week.

Writers in this section show their belief that lifelong education must be just that--provision of education to all at all stages of life. The challenge to educators is to carry out this concept not only in providing programs for new clients, but in rethinking curricular offerings to children and youth whose education need no longer be contained in familiar schedules and spaces.

EDUCATION AND WORK

Education in relation to work actually is a special form of lifelong education. Two authors treat education and work in an especially helpful way. Perrone/38 (501)/ warns against vocational education programs that represent a tracking system:

> ...Vocational education became popular at the turn of the century as a vehicle for preparing young people for the growing industrial workforce. These programs attracted, for the most part, children of the poor and lower middle clases. The same condition exists today. Vocational educational programs represent a tracking mechanism that begins early, generally in the 8th and 9th grades, and tends to limit the options that ultimately are available for those who complete such programs.... Young seventeen and eighteen year olds find themselves with insufficient academic background to pursue postsecondary work in colleges and universities and they are often closed out of many highly technical vocational areas because their science-math backgrounds are inadequate. We need to encourage schools to make fresh efforts to tutor those who need help in reading, writing, math and science in order that their options not be so limited. To argue that "these young people" are just too difficult to teach is no longer acceptable.

Benson and Hoachlander /10 (139-42)/ make recommendations for improving the relationship between education and work:

> The failure of schools to prepare large numbers of young people for rewarding and productive work is widely recognized and...a major stimulus for privatizing public schools. Much less understood is that this failure of public education results as much from the way work is structured and distributed as from the way schooling is organized and delivered. The problem has several different dimensions.
>
> On one level, there is the simple fact that in our present economy there are both good jobs and bad jobs, and the type one gets does not have an especially strong relation to one's educational achievements. If the perceptions of center city youth about the irrelevance of schooling offerings to their lifetime opportunities is not sufficient indication, there is an impressive amount of academic evidence showing that one's social and economic status is best predicted by the socioeconomic status of one's parents. Education thus far has had little impact on this relationship. Despite protestations to the contrary, America is not a classless society, and that fact is clearly understood by a great number of the nation's young people.
>
> Disenchantment with employment opportunities, however, is not limited to the poor. Among children of the middle class, there is increasing uncertainty about what the future holds and whether schooling bears any relevance to what they will be able and willing to do. Young people are acutely aware of the facelessness of modern corporate society and the growing service sector in which the product is increasingly difficult to identify, much less one's role in producing it. Of course, they have not yet experienced this work world first hand and they undoubtedly harbor misconceptions, but they do experience first hand the effects of that world on their parents. The results are often unpleasant--hypertension, alcoholism, drug abuse, physical violence, financial worries, and divorce.
>
> These anxieties and the resulting ennui are exacerbated by more general uncertainties about one's usefulness. Compared to children of a century ago, today's young people have remarkably few opportunities to participate in any kind of productive activity with clear signals that society values the output. No longer able to help with producing food on the farm or engage in other kinds of household production that made them valuable and valued members of the family, "children are a liability," in the words of one well-known manual on child-rearing. There are ample signs that today's young people understand this and resent it but are powerless to do anything about it.
>
> The education crisis, then, is really a crisis in

the world of work, and unless educational policy is linked more closely to labor policy, no educational reform is likely to have much impact. It is not possible here to do more than sketch a few ways in which this linkage might be improved. First, we need to begin exploring ways to distribute work based on one's stage in the life cycle rather than one's position in the social structure. For the next several decades, we will continue to have a large number of relatively unpleasant monotonous jobs that quickly become unrewarding if performed for large periods of time. With the prospect of change and advancement, few jobs are intrinsically boring and unsatisfying. It is only when the rewards cease and there is no hope of escape that work becomes degrading and futile. A young female soccer player, concerned about staying in shape, might find ditch digging tolerable and possibly enjoyable as long as she knew the work was temporary and might better enable her later on to supervise a construction crew. Similarly, a male high school student might find routine office work a good way to practice for typing college term papers or to prepare for an office management position at some later time.

Second, we need to find ways to involve young people in productive activities early on in their school lives. A good place to start is in the school itself, requiring students to assume responsibility for some of the daily operations--answering telephones, sorting mail, sweeping halls, making repairs, tutoring younger students, and so on. A number of vocational schools operate cafeterias staffed mainly by students, and there is no reason why this could not be common practice in most secondary schools. McDonald's has no doubts about high school students' ability to run a restaurant; why should we doubt their ability to run the school cafeteria?

Third, we must give more attention to workers' participation in the management of work, decision over what gets produced and how and when it will get done. Again, the school itself is a place to start.... First, students should be expected to participate more actively in the decisions affecting the management of the school. Second, students should be encouraged to develop and operate small-scale school enterprises that experiment with different kinds of decision-making procedures.

Finally, we must find ways to increase the interaction among education and business and labor, while at the same time placing educators on a more equal footing with the private sector. For some time, educators have rather defensively endured the complaints of many business people that schools simply have not been doing the job and therefore ought to be radically restructured. The complaints are not without

> merit, but it is equally appropriate for educators to make demands of business and labor, arguing that schools can do a better job of educating for work, if work is organized and distributed differently.

Wegmann /23 (286-88)/ discusses a proper mix of work, education and leisure:

> One of the salient issues for American society over the coming decades is whether the predominant pattern--continuing in school full time until 18-22 years of age, and then working continuously until retirement at 65--will continue. There is serious discussion by some authors of the desirability of moving toward a more balanced mix of education, work, and leisure throughout the lifespan, both in the sense of job sharing (two persons fill one full-time job, allowing each half time for education, child care, or whatever), and also in the sense of alternating periods of full-time work, education, and leisure throughout life. These discussions are being supported by recent research findings on adult growth and development, which indicate that the alternating periods of upset and change, integration and stability which have been widely observed in childhood and adolescence in fact continue throughout adult life. For many adults, a return to the university for a year or two is not only a time for advanced education, but a time to reconsider life's purposes, perhaps to change careers, certainly to re-examine values.
>
> Whether this change in what is considered the proper mix of work, education, and leisure will become a reality, however, is not clear. There are certainly a great many structural obstacles, although there are indications that some of these obstacles may lessen. Colleges and universities that were formerly little interested in part-time students (particularly at the graduate level) have become more receptive now that there is a down-turn in student enrollment. In 1967-1968, 1,100 colleges and universities reported offering adult and continuing education. By 1975-1976, this figure had doubled to over 2,000 institutions. Part-time college enrollment is becoming much more common. Since 1970, part-time enrollment has increased from 32 percent of total enrollment to 40 percent, and is expected to continue increasing substantially. Men often did not feel that it was financially possible to take a year or two off for study in mid-life, but increasing numbers of working spouses and fewer or no children create a different situation. Changing careers was once something that suggested a kind of instability. It has now become so common that this is less and less an issue. One census sample found that a third of the adults surveyed had changed occupations in

the preceding five years.

Demographic patterns may also lead to increased pressures for career change and reconsideration in mid-life. Between 1981 and 1987, the number of 35 to 44 year olds will increase by 28 percent. In 1972, there were only 98 workers 35 to 44 for every 100 aged 45-54. By 1985, there will be 142. This could lead to a "promotion squeeze" as the large, well-educated baby boom generation competes for a small number of advanced positions. At least some career ladders will become severely congested. This may lead to demands for career retraining or perhaps to serious reconsiderations of life style goals.

While the proportion of workers who are college graduates will continue to grow, the percentage of professional-technical jobs is projected to remain approximately constant. By 1980 there may be as many as two and a half college graduates competing for every well-paid professional, technical, or managerial position. Even in 1970-1971, only 64 percent of American men were able to find initial professional, technical, or managerial jobs when they graduated from college. The recent drop in the proportion of men attending college is no doubt at least partially due to this situation. (The proportion of women continues to grow, as more opportunities are opened to them).

Should a movement to break up the present life pattern which makes education synonymous with youth, work with adulthood, and retirement with old age actually take hold, there would be a wide range of implications for the schools. The emphasis on "learning how to learn" in the elementary school could be expected to increase. Cooperative education and other school/work combinations would become more popular in high school. Fewer students would go immediately from high school to college. Attempts would be made to find the period in a person's life and career when a given subject matter would be learned best. The problem of offering night courses and part-time instruction while still maintaining a high academic standard can be expected to trouble colleges and universities proud of their reputation for a high quality of education.

As this section shows so well, education in relation to work is no longer almost exclusively a matter of vocational education as we have known it. It is also, in the words of Gappert /21 (261)/ one of helping those being educated to make a "realistic appraisal of work, its meaning, its necessity for life, its rewards, its requirements, and its shortcomings." Development of the "satisifed worker" is the goal of such efforts.

EVALUATION AND RESEARCH

Several of the writers express concern about inappropriate evaluation procedures in education, including misuse of testing. Others deal with the need for kinds of educational research that will contribute to improved practice.

Evaluation in Education

Ashton /43 (574-75)/ gives an example of gross distortion of schooling effects through use of inadequate evaluation instruments:

> While {the} Head Start {compensatory program} was developed to achieve notable advancements in social and personal development, as evidenced by the fact that five of the seven goals for Head Start were related to social and emotional development, the success of the program was initially evaluated in terms of its effect on IQ scores, a particularly inappropriate instrument for the assessment of program effects (Walker 1973).

Kiernan /11 (147)/ believes that while testing "is basic to determining levels of understanding and competency, as well as providing for remedial instruction when and where needed..." the concept has been oversold:

> Parents have been led to believe that the simple provision for such testing is a guarantee that all youngsters will now achieve at extraordinarily high levels, or that all students will do everything well.... What is important is that we diagnose achievement levels and needs and bring each student up to his or her potential prior to sending them out into society.

Perrone /38 (493-94)/ believes that finding easily measured learner outcomes has evolved to be the chief evaluation activity, and that this dependence on the "outcome paradigm" of assessing progress has contributed to the narrowing of curriculum in our schools:

> The popular construct for measuring, the standardized, norm-referenced tests, tends to limit what can be learned about individuals and school as it influences the curriculum itself. For example, while the tests often purport to measure one's ability to read, it must be clear to most educators and parents who examine the tests that they can't represent reading as reading is commonly understood; they are at best weak indicators of reading. Persons who read very well may select "wrong" answers from among the limited

> choices available (the testing construct is dominated by a multiple choice format) for a host of reasons which may have little to do with their ability to read. The tests foster a belief that reading is a set of discrete skills that can be--even should be--learned in isolation. Instructional programs which support such a belief--that are designed to improve scores on such tests--abound, principally, and unfortunately, in programs serving Title I children. What is competency in writing? Is it knowing rules of grammar and spelling or is it the ability to make oneself clear in a written statement...{In} most of the tests that exist, the emphasis is on mechanics, the cosmetics of writing. There are also instructional programs designed to improve test scores in the area of writing. Few, however, demand that students engage in very much writing....
>
> Title II of the Elementary and Secondary Education Act, as amended in 1978, now includes "effective expression, both oral and written" as part of its definition of basics for which states may now write comprehensive plans. How "effective expression" gets assessed, however, will determine to a large extent how congressional intent gets translated into practice.
>
> In relation to standardized tests, Congress might wish to review existing Federal regulations governing evaluation. Many, in fact, encourage the indiscriminate, if not outright misuse, of tests. Title I evaluation protocols, as now being prepared, are a case in point. Students, their parents and teachers are not being served by evaluation systems that give so much weight to "gain scores" on standardized tests. We need, in Title I, and all other areas of education, assessment procedures which are more sensitive to the learning of children and young people across a wide range of curriculum and provide more information that can be used in the development of responsive instructional programs.

Glaser /39 (518)/ offers an explanation of confusion in the area of testing:

> What psychologists know best is the technology of designing tests for the prediction of success in school, and this technology has led to the construction of tests used for selective purposes. In contrast, the theory of achievement testing and techniques for the diagnosis of an individual's attained knowledge and learning resulting from instruction are less well-developed. Confusion in this area has arisen to a large extent because of the attempt to use concepts and techniques developed for the measurement of aptitude and intelligence testing for the measurement of the outcomes of learning.... In the future, it is to be

> anticipated that research on the development of adequate performance measures and on the stages of subject-matter knowledge, in areas such as text comprehension and mathematical skill, will contribute to new practices for assessing competence. These practices should result in information that is indicative of the details of attained individual abilities, and thereby effectively integrate the information obtained from tests with the guidance of learning.

Goodman /36 (476-77)/ recommends three alternatives to standardized tests:

> Self-Evaluation. If children are involved in their own learning, if the aims are *their* aims then they can judge their own progress. Have I understood? Am I learning? Is my solution to the problem an effective one? What else do I need to know? Am I making progress? These are questions teachers can help pupils ask and answer. No evaluation is more useful than self-evaluation in planning further learning.
>
> Kid-watching. Teachers need to become "kid-watchers" once again. They need to know how to observe learners and find their strengths and needs... Teachers spend up to 30 hours a week with children but expensive test programs have undercut their confidence to form their own evaluative judgments. They've come to believe that a test written in Princeton, New Jersey, or Iowa City and administered in a few hours can somehow show more than they know about their students. We must give authority and responsibility for useful evaluation back to the teachers.
>
> Public Scrutiny. The public, particularly parents, have a right to know what our schools are doing. Parents need to be involved in planning. They deserve regular professional reports and they must be welcome in the schools. They need the help of professionals in knowing how to judge pupil progress.

Educational Research

Writers who discuss research in education underline its importance, but plead for changes in dominant patterns. Ashton /43 (577)/ is convinced that research will make a contribution to educational practice if certain conditions are met:

> ...in the eighties significant advances in educational practices will be possible, if adequate procedures are designed to facilitate dissemination of current research findings, and funding is continued for educational research that focuses on the solution of immediate problems in the school context.

Perrone /38 (496-98)/ makes a case for "alternatives to the dominant, quantitative mode of educational research and evaluation":

> The world view that has given form to most educational research and evaluation efforts--and often given status as the "dominant method" or the "scientific method"--is seen in terms of a treatment-result or input-output model; social and historical contexts, aspects of programs as well as individual's lives, are treated as "variables" or "factors" to be interpreted through a range of statistical manipulations; reliability rather than validity is stressed; control, concern about decreasing variability in teacher-child responses, program administration and instructional materials assume paramount importance. The national evaluation of programs such as Follow Through and Head Start should have provided Congress with sufficient evidence to know that this basic model just doesn't provide the kind of information that is helpful in policy formation or theoretical understandings.
>
> While few would deny that many of the research and evaluation activities carried out within this "scientific" tradition are interesting, some even useful, too few have added significantly to our cumulative wisdom or given direction to teachers in classrooms inasmuch as they infrequently get close enough to the important data. The methodology...limits the kinds of questions that are open to investigation, especially in relation to settings as complex as classrooms....
>
> Alternatives to this dominant, quantitative mode of educational research and evaluation are necessary if the quality of our educational enterprise is to improve. The alternative directions are rooted in observation, descriptive analysis and phenomenological inquiry--processes designed to get close to data in order to establish meaning. This construct typically acknowledges the improbability as well as the undesirability of controlling variables within social settings, operates on the assumption that educational growth and development are manifest in diverse and unique ways as well as in shared ways, gives higher priority to validity and reliability is cautious about component analysis.
>
> Now I certainly do not wish to argue that what I have labeled here as the alternative has not been a part of the repertoire of educational researchers and evaluators over the years. Research has obviously encompassed a range of methods for different problems or questions. What I am expressing, however, is that this direction has been given a lower and less credible status within the broad research community and in the

> directives of the Federal government, the largest contributor to educational research, to the detriment of our search for new knowledge and cumulative wisdom. Our 1980s agendas for research need to be more broadly conceived, less devoted to a research direction that has not demonstrated a capacity for coming to terms with the complexities of classrooms, or the important issues relating to children, young people, and learning.

Perrone (498-99) sees value in encouraging teachers to be researchers also:

> How does one get close to classrooms, to learn more about the variety of ways that children come to reading, how children respond to or extend the use of diverse materials, how children use particular language, what processes children go through in problem solving, the degree of continuity that occurs in children's patterns of learning, why teachers do what they do, when and how? The questions are almost inexhaustible. A productive route for responding constructively to such questions...is through and with classroom teachers.... John Dewey, among others, thought of teaching as a professional knowledge producing endeavor. We need now to assume a similar view. Dewey's concern was that teachers needed to maintain a reflective capacity in order to grow, to become individuals who were clear about their intentions and capable of making independent judgments about their classrooms. Teachers with such qualities are capable of informing the research community and assuming a collaborative role. They might also engage in independent research.
>
> Let us assume that encouragement of teachers as researchers--with or without external assistance--produces a deluge of unique descriptions of practice. While some researchers might pale at the prospect, wondering what form generalizations might take, we should, as a matter of public policy, be delighted. The accrual of such accounts would give us some good directions for inquiry, and it would ensure growth in our understandings of classroom practice. Furthermore, teachers' capacity for explicating and understanding practice would increase, thus building more potential for confidence in the schools, a constructive response to the current concern for accountability.

Glaser /39 (505)/ in describing trends in research on learning and schooling sees a place for two kinds of research:

> The boundaries between basic and applied research are becoming increasingly blurred for many psychologists now studying the educational process. Examination of recent work on the nature and development of human knowledge and intellectual skills makes it apparent that this research is fundamental in character and, at the same time, directed toward practical understanding. An interactive network between behavioral science and education appears to be developing in a strong way....
>
> ...in the 1980s, research relevant to education will involve both strong interactions with an advancing science of human cognition and increasingly sophisticated analyses of schooling.

Glaser goes on to present a brief discussion of research on school processes (519-20):

> Past studies designed to evaluate curriculum innovations attempted to describe school learning by relating the nature of student activity to the quality of student work, and only very generally described the processes intervening between the two. In curriculum effectiveness studies, detailed information was rarely obtained about differences between effective and less effective classroom processes in terms of some model of classroom instruction. Models are now being developed that attempt to explain the variation obtained in achievement measures in terms of the initial ability of the student, classroom process variables, and the interaction between the two. This work is being facilitated by the use of new statistical and methodological techniques for observational research and field experimentation.... Attention is now being paid to the development of techniques that apply more directly to school variables and the allocation of educational effort....
>
> Work along these lines involves systematic definition of the details of important dimensions of classroom instruction.... These analyses provide information for practical administrative decisions and also contribute knowledge to potential theories of classroom teaching practices. The development to be anticipated is a growing macro-theory of teaching and instruction: "macro" in the sense that it is concerned with the large practical variables dealt with in schools such as the allocation and efficient use of time, the structure of classroom management, the nature of teacher feedback and reinforcement to the student, the organizational pattern of teacher-student interaction, the relationship between what is taught and what is tested, the degree of classroom flexibility required for adapting to learner background, and the details of curriculum materials as these relate to

> teaching practice and student achievement. Such variables need to be part of a theory of teaching the same way that the large variables of economic theory are applied to economic change. As theory at this level develops, it will be undergirded by the more micro-studies of human thinking, problem solving, and the learning of school subjects. It is possible that, in the future, the two levels, macro- and micro-investigations, will become increasingly articulated in studies of classroom learning and the development of human cognition.

In his conclusion Glaser (520-21) gives an optimistic forecast of applying new scientific research techniques to problems of the sort that concern Perrone:

> Two sources of information--increasing understanding of human learning performance, and analysis of the outcomes of schooling and the effective use of educational resources--will undoubtedly influence policies and patterns of education. Organizational inertia will be overcome by the increased amount of information available to parents, students, and teachers--particularly with respect to the capability of the educational institutions to adapt to the diversity of individuals they serve and to provide both quality and equality in education. In the 1980s, it seems likely that the educational profession will begin to receive the scientific support that should undergird a strong profession.

Botkin /40 (534)/ envisions an "international interdisciplinary program of research on learning":

> The challenge is by the end of the century to achieve breakthroughs that would enhance our presently fragmented, incomplete, and inadequate knowledge of how learning works. The two cornerstones of this undertaking could be neurophysiological brain research and sociopsychological research--with both according due weight to cultural and pedagogical implications of learning. This program could be similar to ones which UNESCO has undertaken for the biosphere (MAB) or for scientific and technological information (UNISIST). This initiative could be launched in several parts of the world at once....

While Perrone and Glaser seem to disagree on the value of the "scientific tradition" in educational research, both see value in research on educational processes in the classroom and Glaser believes more recent research tools have value in developing new knowledge about such processes.

EDUCATION OF PROFESSIONALS

Few authors deal with education of persons to work in the education profession. A few articles make a strong case for attention to the preparation of teachers and urge a greater commitment of time and resources to the development of a cadre of teachers prepared to operate on a growing knowledge base in fulfulling their exceedingly complex role in a modern post-industrial society.

Goldhammer /1 (7-8)/ puts as a first imperative "to build within this nation the professional competence to deal with educational problems so that education can be adapted to current and future societal needs":

> Education, like medicine, has a knowledge base which is essential as the foundation upon which relevant, meaningful and appropriate decisions can be made. Problems of education are too complex to leave to the ignorant and the ill-tutored or poorly trained professionals to resolve. The mobilization, retraining, and improvement of professional competence to deal on as high a level of scientific capability as possible with the problems confronting the renovation of education is the nation's number one need if we are ever to develop an educational system appropriate to the developmental requirements of our children and youth.

Goodlad /54 (689-93)/ makes a strong argument for a longer time for initial preparation of teachers:

> We are coming to understand that successful teachers orchestrate an array of factors: aptitude, ability, perseverance, and the like residing in individual students; concepts and methods of inquiry inherent in the subject fields; the present attainments of instructional groups; pedagogical procedures designed to motivate and sustain students' learning; and so on. Few, if any, teacher education programs consistently produce graduates capable of handling the complexity they confront in the classroom. Keeping a semblance of order and employing a small repertoire of mechanistic teaching skills constitute the level attained by far too many teachers.
>
> At least two dominant assumptions conspire to make teaching one of the minor professions. First, it is widely assumed that there is no special, substantial body of knowledge and skills to be acquired; and little or no professional lore; and that a college degree is sufficient preparation. A scattering of courses in psychology and teaching, together with a few weeks of practice in schools, are assumed to be helpful but not necessary.

The second assumption is that whatever special knowledge and skills may be necessary can be acquired on the job and refined through inservice training--the more practice-oriented the better....

Law and medicine, to take two examples, announce with one degree both a profession and a professional status for the recipient. Although both lawyers and physicians update themselves and specialize further while practicing, few of either group secure additional degrees. The time is come to upgrade the teaching profession by requiring for admission to practice the preparation we {have heretofore assumed} will come later--and awarding at the end of that preparation program the only degree required throughout a lifetime of teaching. It will then be necessary to devise further criteria other than subsequent units of university credit in rewarding personal growth and excellence in teaching.

Now is the strategic time, when we have in general an adequate supply of teachers, to pay attention to matters of quality. Other factors cause the time to be favorable. Interest in teaching historically has increased during periods of economic recession such as the present. Many young people not yet committed to a professional goal would be willing, I believe, to enter teacher education programs deliberately designed to be of highest quality. Although teachers have been in oversupply, there has been attrition in numbers preparing to teach and a continuing modest demand for applicants.

At this time, too, teacher education programs could be the beneficiaries of a substantial body of knowledge about human behavior and teaching produced in recent decades. Even though many teacher educators are inadequately prepared in this relevant knowledge, it now exists. There is a body of professional lore, sufficient to warrant extending the depth and breadth of the teacher education curriculum.

Quality and mass production are hard to reconcile. Consequently, I recommend proceeding selectively to improve the preparation of teachers. Specifically, I suggest that perhaps a dozen of the strongest university-based schools of education be freed, experimentally, to develop programs to include four years of general studies and two years of professional/clinical work leading to a master's degree in teaching. Approximately half of the professional portion would consist of internships on the faculties of local schools. These local schools, in turn, would be part of an intensive school improvement program. In effect, each university would join in a consortium with the best available schools for both educational improvement and teacher education.

Quality and mandated minimums also are hard to

> reconcile. Consequently, I recommend the release of these university-school collaborations from state credentialing requirements. Instead, teacher graduates would be required to pass state licensing exams prior to employment in a school. Colleges of education would find it necessary to attract students on the basis of the recognized quality of their programs.

In the interest of better inservice teacher education, Goodlad (693) pleads for collaboration between universities and schools:

> No major profession has grown up and flourished apart from the university. There are dangerous signs--too many to go into here--that the inservice education of teachers is drifting away from the university. There is grave danger that teaching will become a trade as a result. There is no question that the weakness of many colleges of education has contributed to this separation. But neither colleges of education nor teachers stand to benefit if it continues. The answer lies in a free, competitive market whereby universities are required to build the collaborative relationships suggested in order to be approved to educate teachers and schools are required to join with universities to assure the renewal of their own staffs and programs. Both sides of the collaboration benefit, then, from seeking out quality and endeavoring, together, to improve on that quality.

Perrone /38 (499-501)/ recommends better funding of the Teacher Center program and other forms of pre- and inservice education of teachers:

> We need in the 1980s to give much more attention to the personal and professional growth of teachers....Teacher Centers have the potential for consolidating many of the scattered training programs that exist in the vocational, special, bilingual, parent education areas to the ultimate benefit of children and young people. Teacher Centers can also serve to stimulate school based staff development programs which draw heavily upon teachers themselves. Teacher Center funding, however, needs expansion in the 1980s if the promise of this innovation is to be realized.
>
> Teacher Education programs are underfunded throughout the United States. Given the importance of teachers and educational institutions within communities, teacher education expenditures need to enlarge, not because we need *more* teachers but because we need teachers even better prepared. {It should be noted that current talk of teacher surpluses--which will shrink through the 1980s--tends to mask the continuing need for teachers in particular areas of

> special education, early childhood education, environmental education and the sciences, and for teachers from minority backgrounds--black, Chicano, and American Indian.} Teacher education programs at the preservice level demand far more intensity than our mass programs have been able to provide. Public Law 94-142, for example, which was long overdue, places new and difficult responsibilities on schools and teachers and demands a more diverse preparation than has been typical at both the pre- and inservice levels. In addition, teacher education institutions need to turn increasingly to the task of supporting the development of teachers in their inservice years. To carry out this responsibility is especially costly in time and human resources. While much of the responsibility for funding--in particular the public institutions where most teachers are prepared and supported--rests within the states, added Federal encouragement of experimentation and coordination of teacher education within states and regions would be timely in the 1980s.

Buchen /32 (377-78)/ includes both K-12 education and higher education in his comment on the need for continuing education for members of the profession:

> All trends point to extensive inservice activities for public education and to considerable retraining for higher education for the next ten to fifteen years. Whether that inservice commitment will be officially characterized as "recertification" or be part of an enlightened tenure review policy, professional staff development is emerging as one of the most reasonable and comprehensive ways of dealing with a number of constraints acting on education. These include increasingly tenured, steady-state staff; declining enrollments often accompanied by correspondingly declining budgets; pressures for greater productivity (do more with less, or do more with the same amount); greater public pressure for performance against test results or master plans; greater commitment to career education and back-to-basics.

Baker /45 (600)/ describes changes in "professional preparation needed by those entering school library media program work":

> ...as the need for narrowly focused technical expertise--how to catalog, how to locate special reference books, how to teach mechanical library skills--becomes achievable through the application of programs provided by the wizardry of solid-state circuitry to teaching and technical services, new professional requirements will be called for from library media specialists. Now this professional must

> become a highly skilled program planner and manager; an outstanding teacher and a leader of other teachers as a staff developer; persuasive at coaxing school administrators to adopt new ways or adapt the old to meet new expectations; and a community change agent able to anticipate and serve the needs of new and different users. All of this requires that library education change the focus of its preparation programs.

In planning the education of professionals, it is essential to provide the length and kind of preparation required for a demanding profession like education. Inservice education for retooling an aging teaching group is another challenge to be faced in the 1980s.

CALLS TO ACTION BY THE PROFESSION

Many authors are realistic about problems to be faced by educators but most sound a note of hope and encouragement of positive action. Christensen /35 (462)/ calls for an accent on the positive:

> Perhaps our concentration should be less on that which hinders and more on that which fosters--and then let that fostering increase. What does it take to foster that dynamic encounter of teacher, student and curriculum? What stirs the beginnings and continuation of a long, spirited love affair with learning--an affair surely the most "basic" of all basics? In the midst of accountability, hopefully we will all, in our appropriate positions of influence, be accountable for fostering the best....

Wigginton /34 (451)/, too, encourages fellow professionals to be constructively active:

> Above all, move. Refuse to accept the status quo. Refuse to allow yourself to believe that you have finally found "the way." Know that despite the fact that public schools are less than perfect environments, exciting and creative environments can be nourished within them where genuine learning does take place; and with sensitive leadership, those environments can spread within the system to infect the whole and to embrace the surrounding communities and the larger community of man to the ultimate benefit of all.

The importance of providing equal educational opportunity is emphasized by others. Jones /2 (24)/ is emphatic on this point:

> ...the struggle for equal opportunity is essentially the fight for the ascendancy of reason and humanity over ignorance and indifference. This thought must be a beacon for education in the decade ahead....
>
> Schools must not lose faith in the ability of students to learn, nor should communities lose faith in the ability of schools to lead. The schools are crucial to the positive resolution of any of society's problems. If our youth leave schools prepared only for unemployment and dependency, the vicious cycle of society's ills will be perpetuated.... To continue to provide optimal opportunities for young people to attain their educational and human potential should be the pledge of all involved in education. To this end, nothing less than total commitment will suffice.

Goodman /36 (477-78)/ names forces for progress:

> One force {which will make a new progressivism a reality} is the knowledge base...from recent scientific inquiry....
>
> Another force is rebellion of teachers and other professional educators against the dehumanizing and limiting minimal competency-accountability-systems programs. Teachers have been pushed too far and their alarm for the welfare of children is causing them to seek positive alternatives.
>
> But the major pressure is from the children themselves. We've made them a promise: that promise is equal educational opportunity. They will not be denied that. They will continue to reject schools, in one way or another, until our schools become truly open to them all.

Howe /5 (73-74)/ sees a chance to make progress on both school desegregation and school reform:

> We are engaged in a long, difficult struggle with intractable and multifaceted difficulties {to make progress on school improvement and desegregation}. We shall still be so engaged at the onset of the 1990s. There is no quick fix.
>
> But in the ten years ahead of us we have a chance to make some progress. That chance depends upon our tempering our attitudes toward both pluralism and the melting pot in ways that will allow us to draw strength from both, upon rethinking our obligations and our strategies for bringing children their constitutional rights under the Brown decision, and upon school reform fundamentally based on the exchange between teachers and children.

Major efforts to achieve goals of education are called for by others. Ashton /43 (579)/ maps out a program for achieving educational progress in the 80s:

> When students fail to see a relationship between their interests and needs and the demands of school life, frustration and violence or apathy are likely to follow. When learning experiences are relevant to children's interests and provide them with the opportunity to achieve a new skill or contribute to a meaningful goal, motivation is inherent in the activity itself and teachers are freed from the need to provide external incentives for learning. If schools can respond to children's needs to belong, to be appreciated and valued, to acquire meaningful skills, to contribute to important human endeavors--then the eighties will be a decade of significant educational progress.

Several writers give their advice with a futures perspective. Warner /7 (98)/ cautions against "seeking to recapture the successes of the past":

> Those responsible for American education must look forward. They must develop the capacity for ranking goals and evaluating outcomes. Most importantly, the system must develop the means for helping individuals deal with an ever-changing and uncertain world. Only people with the capacity to make sound decisions will be able to cope with such a world.

Curran /9 (128-29)/ quotes a homely formula for educators to follow:

> ...we are talking about preparing young people for a world we can ourselves only dimly perceive....
>
> Tom Fox, the columnist, quotes his mother's description of what parents must do for children: "Give them roots, and wings." Roots to know where they come from--their heritage and its values--and wings--to dare to grow, to be truly unique, as every human being can and is meant to be. Roots and wings--a good guide for schools and for Congress itself.

CONCLUSION

The content of part two is addressed largely to the education profession, although there are many implications for local, state, and Federal governing bodies as well as the public at large. In particular, the problem of who shall make what decisions where is shared by all. Educators in designing curricula must decide what consideration to give to the future, what basics to provide for, and how to ensure a balanced, fair curriculum for each person being educated, member of a minority or not, while at the same time looking after society's interests. They must deal with such problems in the educational environment as the psychological climate in schools with diverse populations, school plant planning in the face of demographic shifts, media impact as a force to be considered in planning curricula, and uses of technology in the school. Attention must be given to oft-neglected areas like the education of first Americans, children of migrants, rural children, young adolescents, gifted and talented youngsters, people who work at night, and those in mid-career.

The proper relationship between education and work requires thoughtful attention. Also important are proper uses of evaluation and research to give a true picture of education's achievements and provide guidance for future planning.

Challenges to education in the 1980s pointed out by writers quoted in part two of the monograph are sufficient in themselves to suggest an impressive list of targets in the education of professionals in this decade. These targets include:

--development of ability to participate in decision making at the school and district level.

--readiness to help shape the future and educate clients to do likewise.

--ability to design curricula that provide opportunities for all to develop basic beliefs, knowledge, and skills adequate for moving into the twenty-first century.

--comfort and familiarity with the growing technology.

--such caring for the problems and potential of all kinds of students that each may enjoy a lifetime of rewarding education, satisfying work, and fulfilling leisure.

--sufficient competence in statistics to use tests and test results intelligently and to participate in educational research.

All of the foregoing depend on a thorough grounding in the knowledge base and skills of the profession of education.

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PART THREE

RECOMMENDATIONS FOR ACTION AT THE FEDERAL LEVEL

Authors at some point make recommendations clearly designed for the attention of the Congress. At other times they address themselves directly to the new Department of Education. These recommendations for action constitute this part of the monograph.

RECOMMENDATIONS FOR CONGRESSIONAL ACTION

Since the authors represented in the Committee Print are responding to an invitation to advise the Congress with respect to suitable educational policies for the 1980s, it is not surprising that many make specific reference to action appropriate for the Federal government.

Overall Role of the Congress

The advice begins with discussion of the overall role of Congress in American education. Candoli /15 (198-99)/ recommends two types of local school activity which the Congress might reinforce:

> The Congress, through PL 94-142, has already initiated a powerful force toward programming to meet individual student needs. Reinforcement of that concept by providing the necessary recognition of the building as the repository for the bulk of individual educational programs (I.E.P.) activity and by supporting the concept of I.E.P. for all students will give tremendous assistance to the development of building level responsibility.
>
> Extension of the mandate for parent advisory councils to all buildings along with a required local building plan as a vehicle for assessment will dramatically extend the responsibility held at the building level. Accompanying the above must be a decentralized funding concept, i.e., program funds must be allocated directly to building units with the local

> unit determining the line item allocations.
>
> The writer urges that, at the very least, a number of school systems be identified to participate in a demonstration effort.

Jordan /20 (244)/ points out a particular government problem of balancing priorities:

> In the field of education, as well as between education and other governmental services, various competing interests will be likely to continue seeking support for special programs and constituencies, even to the detriment of others. The capacity of government to maintain a balanced perspective in addressing special as well as general societal needs may well be one of the great social challenges of the 1980s.

Tyler /6 (88)/ makes a comprehensive proposal to the Congress:

> At the national level, the Congress can adopt a resolution endorsing comprehensive educational programs that include out-of-school opportunities for learning, and stating a national policy to encourage the full development of human resources through comprehensive educational experiences. The Federal government should authorize support for and appropriate funds to encourage and assist the establishment of community councils and metropolitan or regional task forces to help in developing and maintaining comprehensive educational systems including both schools and voluntary groups.

Maintaining a balanced perspective in addressing the needs of the people of this nation and reinforcing assumption of responsibility by local schools and school districts are the principal pieces of general advice offered.

Educational Civil Rights

Anrig /19 (232)/ sees the need for a Federal role in the area of educational civil rights:

> Progress made in educational civil rights has been one of the most significant Federal contributions to public education over the past two decades. Blacks, other minorities, those who are limited English speaking, females, the poor, and the handicapped have benefited from Federal laws, judicial decisions and executive actions. Their rights transcend state lines and must continue to be a focus of strong Federal monitoring and enforcement. While, hopefully, state and local officials will make Federal intervention increasingly unnecessary, the stakes involved are so

great for individual citizens that a continued Federal role in educational civil rights is essential for the 1980s.

Howe /5 (62-4)/ urges interdepartmental approaches at the Federal level to solving the problem of segregated schools:

> ...lessons about the forces that encourage racial isolation in the living patterns of our cities and suburbs should make us rethink our long-term strategy for school desegregation in the years ahead. It is just plain unrealistic to expect that solely by litigation and its resulting court orders for a variety of traditional remedies such as magnet schools, busing, redistricting, pairing of schools, and the like, we can devise a permanent solution to the school desegregation problems of the massive concentrations of minority group people collected in our largest cities. Nor is it reasonable to assume that enforcement action by HEW under Title VI of the Civil Rights Act can do much more than nibble at the edges of such problems.
>
> I do not want to be misunderstood on this point, for I am not advocating the end of busing, the curtailment of litigation, or any decline in the energy with which HEW pursues its duty to enforce the law. All these activities must continue. They are the best medicines we can prescribe for the disease of segregated urban schools. They bring some change and some progress, and in some smaller cities they offer real hope of beneficial change. But in the most difficult situations, they are palliatives rather than cures. It is possible that litigation seeking metropolitan solutions that include suburban and central city school systems in common desegregation plans may be of major help, but so far the Federal courts have been wary of this approach.
>
> There are, however, important possibilities for a more comprehensive, long-term strategy directed at avoiding the condition of two separate societies--one white and one black and Hispanic--or perhaps even three separate societies, with the rapidly growing proportion of Hispanics settled in enclaves of linguistic and cultural separatism--a development which holds the danger for the United States of its own Spanish-speaking version of the Canadian experience in Quebec. Such a strategy might be forged by bringing together in the courts, in enforcement actions through the administrative departments of government, and in various incentive schemes, the multiple concerns about racial discrimination in the schools, in housing, and in other areas.
>
> In recent months the Justice Department has reorganized its efforts to attack discrimination in education and in housing by bringing these two usually

> separate fields under the same office in its Civil Rights Division. The possibility of school desegregation suits with fair housing litigation worked into them to bring the Federal courts into these clearly related issues at the same time is already being explored in the Justice Department.
>
> On the administrative enforcement front under the requirements of the 1964 and 1968 Civil Rights Acts, it should be possible to devise joint administrative enforcement actions by HEW and HUD, although the idea of two separate departments cooperating in such a politically volatile task probably isn't practical without an initiative from the President to tell them to do so.... But what if a President had enough vision to see that a new long-term strategy linking housing and school desegregation might enable him to suggest the possibility of reducing court orders requiring busing and of eventually reducing the need for busing to give children their constitutional rights? It seems to me that such a promise might be turned into a political asset.

Vocational Education

Porter /4 (49-50)/, concerned over the status of vocational education, presents seven recommendations of the Youth Task Force headed by Eli Ginsburg. These may be recapitualted as follows:

1. Matching grants to state education agencies to adopt the career education act.
2. Detailed studies to discover additional means of providing job opportunities.
3. Targeting of work-study and other work experience programs to the economically disadvantaged.
4. Determination of the programs which work best in placing and retaining youth in the private sector.
5. Consolidating various youth programs.
6. Requiring states to become employers of the last resort.
7. Agreement by funded training agencies with standards of program effectiveness.

Personnel Training

Retraining of educational personnel should be supported by the Congress, Anrig /19 (230-31)/ believes. Pointing out the dilemma of tenured personnel who lose their positions because of reductions in force, he writes:

> These personnel will be at higher salary levels and the chances are slim of their being hired by other districts in such fiscally tight times. Displacement too often will mean exclusion from the profession one prepared for and has been committed to for a number of

> years. In Massachusetts, we are piloting short-term, cross-training institutes for displaced teachers in cooperation with our high technology industry and the state teachers association. Federal support for such cross-training institutes could address the human problem these teachers face, can respond to employment needs of certain industries interested in recruiting mature, college-educated professionals, and can reduce the economic costs to the nation, states, and to the individuals affected by this displacement.

Support of Research

The role of Congress in providing for educational research is treated by several writers. Anrig (229) sees research as a key responsibility of the Federal government:

> ...The task of research in education is one which individual states and localities are unable to perform effectively or efficiently. New knowledge of learning and teaching requires basic and directed research with national support and coordination. The National Institute of Education has begun this task after a difficult genesis. Its role must be nourished and expanded if our shared goals for elementary and secondary education are ever to be fulfilled. Only the Federal government can sustain such an effort. Research (and accompanying evaluation) should continue to be a fundamental part of the Federal role in education.

Little /27 (325, 339)/ asks for closer monitoring of projected birth rates as well as regional and metropolitan migratory patterns:

> Where possible a periodic examination might be made of social and economic composition of prospective enrollments. Such an assessment might require a more detailed examination of children who potentially require special services--non-English speaking children, minority children, single parent families, etc....
>
> Many corporations have recently created new staffs to identify new trends and emerging issues, and interpret the implications of these for their organizations. It would seem plausible that such a staff could be created in the public sector to serve the needs of the education community.

Perrone /38 (495-96)/ calls for historical, descriptive research:

> If we had...better descriptions of school curricula, organizational patterns and instructional processes, as well as the political, economic and social factors which influenced them, we might have a better grasp of what educational reform demands. Lacking historical perspective, we enter often into what are viewed as new directions for reform without a sufficient base or inclination for examining earlier, but similar, efforts and their contexts.
>
> The foregoing suggests...investigation that needs encouragement as part of the nation's research agenda. Unfortunately, historical, descriptive research has not been viewed worthy of support.

Farr /8 (113-15)/ makes a detailed proposal for Federal support of educational research:

> ...the Federal government can do much to encourage educational change and development that can help us realize our dual commitment to quality and equality....
>
> Coupled to a current description of (a) where we need to go with education, (b) how far along that path we are, and (c) what we are now doing to close the gap, the Federal government can encourage educational research and development to attempt to discover more effective methods and procedures to get there. We need extensive efforts to determine what methodologies are most effective in the classroom....
>
> There has never been a pronounced Federal emphasis on improving teacher practices or teacher education.... the Federal government should contribute to the improvement of teacher education by increasing its funding of experimental preservice and inservice training....
>
> The Federal government should encourage and fund additional educational research efforts that are directed toward the solution of known problem areas in education. For example, it is a well-established fact that children from low socioeconomic backgrounds are more apt to experience reading difficulties than children from middle or high socioeconomic backgrounds. We need to continue to expand resources to develop reading methods, materials, and programs that can be used more effectively with such populations, taking account that children do not all have the same background of experiences and opportunities....
>
> In promoting such development, Federal incentives should encourage changes that more effectively link instruction within the school itself to the educational opportunities in and responsibilities of our society at large....
>
> Finally, the Federal government has the obligation to effectively disseminate the information it generates with public funds....

> If teachers, professional educators, parents, decison makers, and the public at large are to express their concern and have input into decisions affecting education, they need to exercise that input from a fully informed perspective.

Funding Practices

Federal funding practices are discussed by several writers. Warner /7 (93-94)/ mentions the unfortunate effect of some Federal regulations. For example, "the intent of the developers of career education was that...the concept was to be integrated into existing programs.... {However, the} Federal regulations themselves often created the need for those programs to be discrete entities...." Anrig /19 (228-29)/ deals with categorical aid:

> I propose that the Federal investment in elementary and secondary education gradually shift from large categorical aid to large incentive aid for intrastate and interstate equalization. States should not qualify for this aid until they have demonstrated state effort and state commitment, not only to equalization, but to the goals which underlie present Federal categorical aid (disadvantaged, handicapped, bilingual, vocational, etc.)
>
> Such a shift might require a dual-track policy. States could become eligible for incentive aid, or continue indefinitely (or for a defined period) to receive categorical aid. This would permit a more individualized approach to the states based both on their needs _and_ their actions.
>
> Such a refocus of Federal education aid would have advantages in a period of demographic change. It would appeal to all voters because it would affect their school taxes. It would complement changes taking place at the state level due to court decisions and legislative action, and thereby enhance greater coordination of Federal and state aid. It would reduce growing tensions over Federal regulations and paperwork burdens. It could strengthen local-state-Federal governance of education in a manner consistent with time-honored traditions, while promoting the national goal of equality in educational opportunity. And, finally, it could provide a positive avenue for the new Department of Education to phase out of the administration of a growing proliferation of categorical programs--each compartmentalized, underfunded, and promoting special rather than common interests within the educational community at a time when greater unity is essential.

Howe /5 (70, 72-73)/ shows that Federal funding can both help and hinder local educational efforts:

> I suspect that one reason for the decline in morale and the growth of discouragement among school teachers has been the vote of no confidence they received from the political representatives of the American people. I know of no profession that has been harrassed to the same degree by politicians, who have decided to take into their own hands the details of a complex business, teaching and learning, that these same politicians know very little about. They have imposed state laws about the accountability of teachers and the testing of children that intrude into the educational process in unforeseen ways. The bandwagon of basic competency testing has spread so rapidly that it is hard to find a state without this unproved nostrum as its main answer to the improvement of teaching and learning....
>
> Bringing about a commitment to these purposes in our schools cannot be legislated by state or national government. It is more the business of local school boards and local superintendents and still more the concern of principals and teachers. But state and national governments can help in two ways--by providing funds and by refraining from writing detailed prescriptions about how they are to be used. The best rethinking and reform of practice in the schools will come from persons who encounter children every day, not from persons removed from that experience.
>
> Back in 1967 the Congress and the President created the Education Professions Development Act to provide resources for the retraining of teachers and other educational personnel. The core of this legislation was allowed to lapse in 1975. Although it had some imperfections, we need something like it in the 1980s. Also, we need to recognize in states and local districts that funds from Title I of the Elementary and Secondary Education Act, the really large-scale source of Federal money for schools, can be turned to the same purposes {professional development}. In addition, schools need more freedom than they are now allowed to combine funds from different sources for the benefit of children in the classroom. The concept that numerous Federal programs for assistance to education must be separate and discrete in the school is a prescription for educational chaos.

ADVICE TO THE DEPARTMENT OF EDUCATION

It can be assumed that the new Department of Education will aid the Congress in studying the foregoing proposals, giving advice and helping to carry out those that are adopted. In addition, some advice is addressed to the Department itself. Cortes, Barcelo, and Schroyer /52 (667-69, 672)/ make a special plea for support of migrant education:

> ...because migrant education programs are national in scope, the newly established Department of Education must exert a stronger leadership role in the development of national goals and strategies in order to ensure the special educational needs of migrant children with limited English language proficiency are met.... The Department of Education Organization Act of 1979 (DEOA) will reorganize the administration of education programs in the United States. Embodied within this reorganization is a provision for the development of a "single component responsible for the administration and coordination of programs relating to the education of migrants" (Section 303(a) of DEOA). Such a component will be responsible for the administration of all elementary, secondary, and postsecondary programs involving migrants. Those programs currently located in the Department of Labor will be transferred to the Department of Education following the establishment of the single migrant education office.... It is hoped that the establishment of the new Office of Migrant Education Services will lead to the development of a unified approach to migrant education through coordination of migrant, as well as other related programs within the Department of Education....
>
> Unfortunately, migrant preschool and Head Start programs have suffered from a critical lack of funding. Title I migrant monies provide preschool programs to more children than any other funding source, but there is no separate funding base for the preschool programs. Funds for {these} must be "siphoned off" from regular Title I migrant monies. It is only after school-aged children have been provided with effective programs that their preschool-aged siblings warrant funds....
>
> There is no accurate estimation of the number of undocumented workers living in the United States; estimates range from less than one million to more than twelve million. Many of these undocumented workers are migrant farm laborers and some have school-aged children who travel with them. Some of these children of undocumented migrant workers are enrolled in public schools throughout the country and face the same problems as those confronting the children of domestic migrant workers.

> Various efforts have been made to deny these children an education in public schools in the United States, but the courts in some states have supported the rights of children of undocumented workers to attend public schools....
>
> The National Council of La Raza supports such rights for these children, for it is our contention that all children in this country, regardless of their parents' citizenship status, deserve and have constitutional rights to be educated.... undocumented workers pay taxes and are a source of economical prosperity for their employers, however, they themselves attain few privileges or seek social benefits. We, therefore, feel that the children of such workers are victims of circumstance and should not be denied educational opportunities in this country.

Dillon-Peterson /30 (371)/ proposes a national consensus-building effort, which might be organized by the new Secretary of Education:

> We as a nation need desperately to give serious, immediate attention to the purpose of education.... We need to get the best minds in our country to look at its possibilities--and its limitations--and to determine a national direction for it which will provide a realistic sense of direction for all citizens--recognizing that all citizens are affected by education in critical ways.
>
> One way of accomplishing this Herculean task would be to commission the...Cabinet officer for Education...to conduct local and regional consensus-building conventions between now and 1985, which should be followed by a national convention having as its purposes:
>
> 1. Clarification of what schools should and should not be expected to do.
> 2. Development of short- and long-range goals which will, in effect, provide a framework within which educators can work positively, constructively, and flexibly toward common ends.
> 3. Determination of what commitment we as individuals and a nation have to education--both in terms of human energy and economic commitment in the light of the goals enunciated.

Goldhammer /1 (8-9)/ has a different suggestion for arriving at national educational purposes. While not addressed to the Department of Education, the proposal of a national policy-recommending body might well be adopted by the Department of Education in consultation with appropriate professional and lay groups. Goldhammer writes:

> ...at the same time that this nation is building a higher level of professional competence, it should also help the public realistically to formulate a perspective of what the schools can and should do for American society in the twenty-first century. In spite of the current trend of having all decisions made on the basis of some form of consensus, it would seem to be far better to establish a committee composed of highly knowledgeable laymen and very broadly educated and competent professionals who can constitute a panel which constantly identifies the most critical, societal and human concerns with which education should deal as it prepares to meet the challenges of the twenty-first century. That is the function the old Educational Policies Commission performed, and its demise has left this nation without an agency that can chart direction disinterestedly and objectively identify the most critical issues and developmental concerns upon which the schools should be embarking. Just as the public interest could scarcely be represented without local boards of education, without an objective and public spirited national policy-recommending body on the national scene, decisions about education are frequently made without an established public accountability.

CONCLUSION

A key concept in organized education is opportunities for development and learning. Opportunities have content, they are offered in some kind of environment, and they are mediated by teaching. Educational planning takes the form of designing opportunities--and in this nation the commitment is that these opportunities shall be appropriate for each and every person being educated. Educational administrators, supervisors, and teachers have the responsibility of providing the wherewithal--the spaces, the materials and equipment, and the instructional processes--necessary for each student to have access to opportunities right for him or her.

If there is one thread running through all the advice for action at the Federal level, it is that the Federal government should encourage the provision of appropriate educational opportunities to a wide range of clients without dictating in precise detail what should be done and how it should be accomplished. Encouragement may take the form of legislative acts pointing up an area of need and providing financial support to states and local districts in meeting the need. (Some prefer general, rather than categorical, financial support to enable local districts to meet needs they determine for themselves.) It may take the form of financial participation in the training of professionals that they be adequately prepared to carry out the demanding functions of education in this society. It may take the form of support of educational research by the National Institute of Education or by researchers in the universities and schools across the nation. Another kind of encouragement may be acts of leadership on the part of the Department of Education. An example would be action by the Department to execute ideas like the consensus-building proposal of Dillon-Peterson and Goldhammer's recommendation of a successor to the defunct Educational Policies Commission. If those ideas were to be combined and put into effect, the Congress would have a useful partner in charting a course for education in the 1980s.

The course of education in this decade would include the profession's learning and helping younger and older members of the society learn:

1. to find new forms of partnership in providing education for all the people in this multicultural society.
2. to live with others, binding unity with diversity.
3. to live well with limits.
4. to engage the future.

PART FOUR

PEDAGOGICAL EDUCATION IN THE 1980s

For reference to preparation of administrators, supervisors, counselors, and resource teachers as well as classroom teachers for a school system, the term *teacher education* is inadequate. To speak instead of the "preparation of professional educators" is an awkward circumlocution and is ambiguous besides, because those preparing future lawyers, doctors, social workers, and the like also are professional educators. In a 1980 publication of the U.S. Department of Education, *A Design for a School of Pedagogy*, B. Othanel Smith makes a case for the use of the word *pedagogy* (from the Greek meaning "child tutoring") to designate the science and art of education. He recommends *pedagogical* education to refer to the preparation of all professional personnel serving persons being educated in schools. In this part of the monograph Smith's terminology is used throughout.

Part four brings together implications for pedagogical education in the 1980s from Committee Print articles dealing directly with the preparation of *professional educators* and from the monograph as a whole. To round out the picture, the writer has added ideas not covered in the monograph. Even so, there is no thought that this material covers the complete subject. There is considerable literature to be consulted, among which Smith's new work is highly pertinent and suggestive.

As these final pages are studied, the reader is urged to make three assumptions: (1) that the public school can and must survive, (2) that the pedagogical function in the 1980s and beyond will be exercised not only in public and private schools but in a variety of community settings, and (3) that the need for highly competent pedagogues will continue as will the need for outstanding institutions and programs to prepare them.

Because it is so crucial that this society have pedagogues with the highest possible quality of preparation to begin with, the pedagogical institution itself must take leadership. This institution must go on the offensive as the center for collaboration with schools and communities, professional organizations, the state department of education, and Federal agencies in fashioning and conducting a program worthy of the needs and resources of this nation. There will continue to be need for helping those currently in service to improve their understandings and skills, and universities should play a role in such continuing education. However, if novices were to have a longer and better program of preparation for entry into the pedagogical profession, they would need only the kind of continuing education that would keep them abreast of new developments; that is, unless they change their role and thus need special preparation.

A beginning in planning might be made by studying the section on demographics, which contains factual information basic to decisions on numbers of teachers who probably will be needed at different levels of the education system in this decade. Facts about variations in expected increases and decreases in population in different parts of the nation suggest the need for careful study of actual trends in a given region and in the area from which a pedagogical institution draws its students as well as in areas into which its graduates go. Such facts will help an institution avoid a fallacious assumption that an oversupply of teachers may be expected for some years to come.

The section on demographics also shows trends in composition of school populations. Any one pedagogical institution will need to determine the kinds of pupils whom its graduates should be prepared to teach.

For two specific purposes, institutions should also arm themselves with figures on an aging group of teachers left in place as falling enrollments make replacements rare: (1) to cooperate with local school systems and the organized teaching profession in offering inservice education for pedagogues meeting new conditions in the 1980s, and (2) to begin now to select and prepare an especially strong component of young teachers to be fed into the profession as school enrollments in various localities warrant increases in staff.

In the section on decision making, there were many references to the importance of local involvement in educational decisions, including community participation at that level. Thus, it is urgent that a pedagogical institution develop a partnership with local school systems in the initial preparation of pedagogues. It is equally important that pedagogues in training have ample opportunity to develop the knowledge and skills pertinent to understanding and working effectively with community groups and individuals.

In the section on education of professionals, a strong case is made for preparation of the pedagogical profession comparable to that of professions such as law, medicine, and social services. In other words, serious consideration should be given to providing in a university setting an independent school or college for preparation of pedagogues. Prerequisite for admission would be undergraduate general and prepedagogical education especially designed to provide basic knowledge in behavioral and social sciences and liberal arts essential for future pedagogues.

Not developed in the papers on which this monograph was based is the whole matter of content of pedagogical education. The lists derived from the material in part one p. 27. and part two p. 105., though not all-inclusive, should be helpful in designing content of the program.

Pedagogical faculty development is another problem that goes beyond the Committee Print but which is necessary now more than ever if pedagogical institutions are to fulfill the leadership role advocated earlier. Just as pedagogues in the schools must be prepared to deal with the realities of the '80s, so must those preparing the pedagogues. They must be versed in content recommended for future pedagogues and in up-to-date methods useful in delivering such content, especially those methods involving technology. A pedagogical education faculty must also operate from a growing base of knowledge and skills, which includes such items as:

1. The best that is known about college teaching.
2. Ways in which young adults develop meaningful concepts and useful skills.
3. Bases for effective laboratory and field experiences.
4. The kinds and amounts of knowledge that graduates of the program of preparation should possess.
5. Relevant knowledge from the disciplines, especially disciplines undergirding professional practice.
6. Understanding of effective procedures for changing a college curriculum.
7. Procedures for evaluating various components and the entire program of preparation.
8. Knowledge and skills required to examine systematically their own behavior and the program in which they work.

Finally, pedagogical education faculties should be contributing to the base of knowledge and skills of their profession through research. Not only would such research add to the knowledge and skills now available, but preservice students and pedagogues in service would benefit if they were to be involved in the research process. They could thus develop the inclination and skills to make their own contributions as researchers. At the very least, they would be more intelligent consumers of the research findings of others.

Scholars who have for a number of years been examining the socialization of novices into one or another professional culture have reported repeatedly that a novice takes on the culture of a chosen profession--its knowledge, values, attitudes, skills, and ways of behaving--as much by osmosis as by didactics. Pedagogical educators provide the models for young persons entering the practice of pedagogy, and therefore their behavior contributes significantly to the professional socialization of future members of their own profession. One giant step toward the further professionalization of pedagogy, then, would be for pedagogical educators to demonstrate practices urged in these last pages--planning on the basis of solid facts and reasonable projections, operating from a substantial base of knowledge and skills, and contributing to an increase in that base. By such modeling, pedagogical educators can earn respect for themselves and the broad profession they serve.

APPENDIX A

COMMITTEE PRINT TABLE OF CONTENTS

Note: The numbers on the left correspond to the numbers used to identify the authors in the text.

PART I--LEADERSHIP AND GOVERNANCE

1. An Agenda for Education for the Next Generation
   Keith Goldhammer, Dean, College of Education, Michigan State University
2. Facing the Eighties: Elementary, Secondary, and Vocational Education Needs
   J.L. Jones, Superintendent, Dade County Public Schools, Miami, Florida
3. The Next Ten Years in Education
   Chris Dede, President, Education Section, World Future Society
4. Elementary, Secondary, and Vocational Education Needs for the 1980s
   John W. Porter, President, Eastern Michigan University
5. The Brown Decision, Pluralism, and the Schools in the 1980s
   Harold Howe, Vice President for Education and Research, The Ford Foundation
6. The Needs of Elementary and Secondary Education for the 1980s
   Ralph W. Tyler, Director Emeritus, Center for Advanced Study in the Behavioral Sciences, Science Research Associates
7. Decision-Making and the Schools in the 1980s
   Richard W. Warner, Jr., School of Education, Auburn University
8. Let's Build on the Strengths of our Comprehensive Public School System: A Recommendation for Educational Policy Makers
   Roger Farr, Professor of Education and Director of the Henry Lester Smith for Research in Education, School of Education, Indiana University; and President, International Reading Association (1979-80)
9. Education in the '80s: A Leadership Opportunity for the Congress
   Rev. Msgr. Paul F. Curran, Assistant Superintendent of Catholic Schools, Archdiocese of Philadelphia
10. The Privatization of Public Education: Implications for Educational Policy
    Charles S. Benson and E. Gareth Hoachlander, University of California, Berkeley
11. Issues for the 1980s
    Owen B. Kiernan, Executive Director, The National Association of Secondary School Principals

12. An Imperative for Change: A Goal for the Next Five Years
National Committee for Citizens in Education, Columbia, Maryland
13. Quality of Education and the Diminution of Local Control in Schools in the United States
Robert E. Stake, University of Illinois at Urbana-Champaign
14. Education in the Eighties: The Case for Optimism
Stephen K. Bailey, Professor of Education and Social Policy, Harvard Graduate School of Education, Harvard University
15. Policy Considerations for Education in the 1980s
I.C. Candoli, Department of Educational Administration, Foundations, and Higher Education, University of Kansas
16. Rocky Too: The Challenge of Rural Education in the 1980s
Jonathan P. Sher, Center for Educational Research and Innovation, Organization for Economic Cooperation and Development
17. Small School Districts' Concerns for the '80s
Paul B. Salmon, Executive Director, American Association of School Administrators
18. Selected Needs of Elementary/Secondary Education in the 1980s
A. Craig Phillips, State Superintendent, State Superintendent of Public Instruction, State of North Carolina
19. One Viewpoint on the Needs of Elementary and Secondary Education for the 1980s
Gregory R. Anrig, Commissioner of Education, Commonwealth of Massachusetts
20. Challenges to Education in the 1980s
K. Forbis Jordan, Senior Specialist in Education, Congressional Research Service, Library of Congress

PART II--SOCIAL CHANGE AND DEMOGRAPHICS

21. The Educational Consequences of Post-Affluence
G. Michael Gappert, Director, Urban Development, Research for Better Schools, Philadelphia, Pennsylvania
22. Redress the Educational System
Sondra Ford, College of Human Development and Learning, Murray State University, Murray, Kentucky
23. Educational Challenges of the 1980s
Robert G. Wegmann, Office of Planning and Program Development, The National Institute of Education
24. Population and Education: How Demographic Trends Will Shape the U.S.
Joseph F. Coates, Assistant to the Director, Office of Technology Assessment, United States Congress
25. The Student of the Future: A Profile
Phoebe P. Hollis, Department of Communication, University of Nebraska at Omaha
26. Beyond the Baby Boom: The Depopulation of America
Peter Morrison, Senior Staff, The Rand Corporation

27. Demographic Projections and Educational Policy Issues
    Dennis L. Little, Specialist in Futures Research, Congressional Research Service, Library of Congress
28. Education in the Suburbs--So Goes the Nation
    Donald G. Hays, Administrator, Special Services, Fullerton Union High School District, Fullerton, California
29. The Double Jeopardy of Rural Schools in the 1980s: Problems and Potential for Renewal
    Gail Armstrong Parks, National Rural Center, Washington, D.C.
30. Educational Concerns for the 1980s
    Elizabeth A. Dillon-Peterson, Director of Staff Development, Lincoln Public Schools, Lincoln, Nebraska

PART III--KNOWLEDGE, TECHNOLOGY, AND CURRICULUM

31. Public Elementary and Secondary Education in the 80s
    H.S. Broudy, University of Illinois at Urbana-Champaign
32. Curriculum 2000: Futures Basics
    Irving H. Buchen, Dean, School of Humanities, California State College at San Bernadino
33. Mass Media Values and the Future of Education
    John D. Pulliam, Professor of Education, University of Oklahoma; Fred D. Kierstead, Associate Professor in Education and Futures Studies, University of Houston at Clear Lake City; and Jim Bowman, Associate Professor in Education and Futures Studies, University of Houston at Clear Lake City
34. Introduction--Foxfire 6
    Eliot Wigginton, President, The Foxfire Fund, Inc.
35. Color and Spirit
    Jane Christensen, Chair, Language Arts Department, Everitt Junior High School, Wheat Ridge, Colorado
36. Needed for the '80s: Schools That Start Where the Learners Are
    Kenneth S. Goodman, Professor of Education, University of Arizona
37. The IEP: Problem or Solution?
    Sister Caroleen Hensgen, Superintendent of Schools, Dicoese of Dallas
38. Reflections on Elementary and Secondary Education: A Prelude to the 1980s
    Vito Perrone, Center for Teaching and Learning, University of North Dakota
39. Trends and Research Questions in Research on Learning and Schooling
    Robert Glaser, Learning Research and Development Center, University of Pittsburgh
40. Education and Global Problems: A Note of Cautious Hope
    James W. Botkin, Project on Learning, Club of Rome, Cambridge, Massachusetts

41. Learning and Authority
Sister Mary Sarah Fasenmeyer, Dean, School of Education and Human Serivces, St. Johns University, Jamaica, New York
42. Education for the '80s and Beyond--The Socio-Scientific Reasoning Model
Louis A. Iozzi, The Institute for Science, Technology, Social Science Education, Rutgers--The State University of New Jersey
43. Strategies for Educational Progress in the Eighties
Patricia Ashton, Foundations of Education, College of Education, University of Florida at Gainesville
44. Intermediate Schooling: Decisions for the 1980s
Joan Sheff Lipsitz, Director, Center for Early Adolescence, University of North Carolina at Chapel Hill
45. Education and Media in the 1980s
D. Philip Baker, Coordinator of Library Media Programs, Stamford Public Schools, Stamford, Connecticut
46. Libraries, Information, Freedom, and Children
Peggy Sullivan, Assistant Commissioner for Extension Services, The Chicago Public Library
47. Educational Opportunities for the Night People, the Drop-Ins, the Young Adults, the Diaper Crowd, the Mid-Lifers
Martha Dell Sanders, Director of Instruction and Professional Development, Kentucky Education Association
48. Community Service: A Case Study
Anthony L. Cassen, Coordinator, Westtown School, Chester County, Pennsylvania
49. Can We Have Equality and Educational Excellence? A Proposal for Maximum Gain for Minimum Investment
James J. Gallagher, Director, Frank Porter Graham Child Development Center, School of Education, University of North Carolina at Chapel Hill
50. Indian Education in the 1980s
Stuart A. Tonemah, President, National Indian Education Association
51. The '80s--Return to Traditions
Vine Deloria, Jr., Professor of Political Science, University of Arizona
52. The Needs of Elementary and Secondary Education: Policy Issues on Migrant Education
Michael Cortes; Cosme J. Barcelo, Jr.; and Janet Schroyer; National Council of La Raza, Washington, D.C.
53. Meeting the Challenge--Serving Migrant Children
Killian Jordan, National Child Labor Committee, New York
54. Improving Elementary and Secondary Education in the 1980s
John I. Goodlad, University of California, Los Angeles, and Institute for Development of Educational Activities, Inc.

APPENDIX 2

ABSTRACTS OF COMMITTEE PRINT ARTICLES
(alphabetical by author)

The original 700-page Committee Print and all 54 individual articles are indexed and abstracted in the Educational Resources Information Center (ERIC) monthly index to document literature, Resources in Education (RIE). Most of these documents are available in paper copy, microfiche, or both from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, VA 22210. In the following abstracts, "ED" refers to the actual ERIC document number, and "SP" refers to the Clearinghouse on Teacher Education identification number. Both numbers can be used to order from EDRS. For more explicit availability and ordering information, consult RIE. Two of the articles were reprinted from The Futurist and are unavailable from EDRS; these are noted in the abstracts.

ED 185 660. Needs of Elementary and Secondary Education in the 1980's. A Compendium of Policy Papers. Committee Print. 96th Congress, 2d Session, House Committee on Education and Labor. Washington, D.C.: Government Printing Office, 1980.

19. Anrig, Gregory R. "One Viewpoint on the Needs of Elementary and Secondary Education for the 1980s." Policy for elementary and secondary education in the 1980s should maintain the "local control, state leadership, Federal concern" triad of responsibility. Though the states are beginning to take the responsibility of ensuring equal education, an attractive Federal incentive is still needed. Aid should be made on an incentive, rather than categorical, basis. Government efforts should be focused in four areas: (1) more research and wider dissemination of the results; (2) improved teacher training; (3) technology; and (4) a renewed commitment to civil rights. (SAS) (SP 016 977)

43. Ashton, Patricia. "Strategies for Educational Progress in the Eighties." Those concerned about promoting children's academic achievement must first be concerned about insuring all children the right to adequate food, shelter, security, and love. When these elemental needs have been met, students are then free to respond to their need to know and understand. If schools can respond to children's needs to belong, to be appreciated and valued, to acquire meaningful skills, to contribute to important human endeavors--then the eighties will be a decade of significant educational progress. Major efforts needed to achieve these goals include: (1) school programs aimed at the development of social responsibility; (2) specifications of long range educational goals and development of appropriate instruments for evaluation of goal attainment; (3) curriculum materials that are developmentally appropriate; (4) development of effective teacher-student relationships; (5) research aimed at

solving school problems; and (6) professional education of teachers. (CJ) (SP 016 946)

14. Bailey, Stephen K. "Education in the Eighties: The Case for Optimism." Causes for optimism in attitudes about education include the growing maturity of educators about the connection of Federal, state, and local laws that affect education, the increasing realization of the revolution in fairness that at present permeates the society, and a growing impatience with laxity in education. Schools are striving for educational equity, improved inservice teacher education and professional development, and more support services. Administrators, teachers, and parents are realizing and accepting their responsibilitites in the educational process. A growing maturity, an unwillingness to be intimidated, and the recognition that complexity is negotiable are qualities that contribute to an optimistic outlook for the future. (CMJ) (SP 016 973)

45. Baker, D. Philip. "Education and Media in the 1980s." No culture in the world's history has been so consumed with controlling the future's course, and conversely, so unconcerned with discovering meaning from the past. Predicting the course of school library media programs in the decade ahead requires a commitment to common sense, a dedication to patience and good judgment, and a preoccupation with developing a consensus that leads to accommodation. Growing access to and use of commercial information data bases and computerized data bases of cataloguing and bibliographic information will accelerate within schools. The growth of cable television will spark an information explosion that will culminate with the acceptance of television into its proper educational role. (JN) (SP 016 961)

10. Benson, Charles S.; Hoachlander, E. Gareth. "The Privatization of Public Education: Implications for Educational Policy." Discontent with public education is feeding a movement to make private education public policy, with potentially disastrous results. Unionization and bureaucratization of the public schools has lessened their effectiveness and disaffected parents feel increasingly that public schools do not offer children social mobility and the opportunity for economic equality. This is particularly true in the case of children at the lower socioeconomic level. Privatization of the schools is not feasible for the urban poor. This concept diverts attention from the basic problems of educating this sizeable group of children. A closer relationship between schooling and active participation in the labor force will make education more relevant to the needs of these students. (SAS) (SP 016 968)

40. Botkin, James W. "Education and Global Problems: A Note of Cautious Hope." Science and technology have created so much change so fast that people are unable to keep up, resulting in confusion and "the human gap." Most learning is designed to maintain the status quo ("maintenance learning"), when it should be directed at coping with and managing change ("innovative

learning"). Learning, if directed toward enhancing individual and societal anticipation and participation, will be an indispensable prerequisite in preparing humanity for its own future. Innovative learning has two parts: the anticipation of problems, and problem solving. Speculations on the obstacles in the way of widespread acceptance of innovative learning and what to do about those obstacles are presented. (SAS) (SP 016 947)

31. Broudy, H.S. "Public Elementary and Secondary Education in the '80s." Privatism, vouchers, too many pressure groups, and a deemphasis of citizenship present the worst stumbling blocks to education. A five-point curriculum model includes: (1) the symbolics of information--the skills of language and computation; (2) the key concepts of a selected set of the physical sciences and mathematics; (3) developmental studies in three substrands (development of the cosmos, development of institutions, and development of culture); (4) problem solving of current societal import; and (5) exemplars--a selected set of class works that are worth studying in detail. The adoption of such a curriculum design would contribute to the needs of all constituencies. (SAS) (SP 015 937)

32. Buchen, Irving H. "Curriculum 2000: Futures Basics." A changed curriculum will be necessary for education in the future. Current social and demographic trends emphasize the need for futures studies and systems dynamics. Educational personnel must be aware of and understand social trends of increased information generation, numerical literacy, the growing importance of and dependence on machines, and the increase of complexity in institutions and systems. Education in and for the future must cover the present and future status of these trends. Reading, writing, and computation skills must be supplemented by skills students will need for the future. (SAS) (SP 016 951)

15. Candoli, I.C. "Policy Considerations for Education in the 1980s." School systems in the United States reflect its social system and changes. Societal trends that have affected educational institutions include declining enrollment, informed and politically active minority groups, accelerating inflation, the back-to-basics-movement, and a general public mistrust. To survive, public education must define the roles of local, state, and Federal governance by determining the goals and responsibilities of each level. Educational plans developed at each level should be evaluated at the next level to guarantee performance. (CMJ) (SP 016 972)

48. Cassen, Anthony L. "Community Service: A Case Study." A successful student volunteer program for providing community services, initiated by the Quaker-run Westtown School, is described. After arranging for recruitment and orientation of student volunteers, cooperating agencies, and faculty sponsors, evaluation processes, daily schedules, and public relations policies were devised. Students, agencies, and faculty all had positive remarks about working with older adults, low income

families, the mentally retarded, health agencies, emotionally deprived children, delinquent youth, the Hispanic population, and women's centers. (SAS) (SP 016 967)

35. Christensen, Jane. "Color and Spirit." In the best learning environment, the curriculum meets student needs, teachers receive both emotional and administrative support. A program to assist teachers in keeping up with the profession should include provision of a sense of personal renewal, continued confidence in abilities, and new developments in various fields of study. This can be provided locally, regionally, and nationally through diverse methods: visiting scholars, research in troublesome areas, master teachers, curriculum research done by teachers, and collegiate education departments serving as teacher centers. Resulting teacher improvement will lead to the meeting of student needs: ability to concentrate and be interested; ability to express oneself orally or in writing; ability to cope with inner and outer change; and ability to choose and practice values. (SAS) (SP 016 948)

24. Coates, Joseph F. "Population and Education: How Demographic Trends Will Shape the U.S." The need for demographic research relevant to plans for adult education, day care, nursery care, and after-school services is increasing along with demand for such services. Demographic data is essential for wise policymaking needed to build effective educational systems. Trends affecting education include more and more women in the work force, continued immigration to major U.S. cities, and ease of movement around the United States. State and local educational agencies must be able to examine and understand the roles of the changing family, internal migration, teenage childbearing, and declines in school enrollments to make education effective. (CJ) (SP 017 294)

52. Cortes, Michael; And Others. "The Needs of Elementary and Secondary Education: Policy Issues on Migrant Education." The children of migrant agricultural workers face what appear to be insurmountable barriers as they attempt to attain a rudimentary education. Obstacles include poverty, mobility, economic insecurity, and linguistic disparity. Issues pertaining to the improvement of migrant education include: (1) expanding the definition of "agricultural activity" to include additional mobile populations; (2) involving migrant parents in their children's education; (3) providing bilingual/bicultural education; (4) increasing school enrollment of migrant children; (5) coordinating of migrant programs within the Department of Education; (6) providing migrant head start programs; (7) using the Community Services Administration; (8) assessing effects of competency-based testing; (9) assuring educational rights of children of undocumented migrant workers; and (10) involving community based organizations. (CMJ) (SP 016 964)

9. Curran, Paul F. "Education in the 80s: A Leadership Opportunity for the Congress." The Congress should be the principal architect of educational policy in the 1980s through: preserving traditional middle-class values in any potential legislation, reducing regulations and paperwork, insuring a positive climate for political forces that shape education, rewarding success and fostering accountability, and encouraging diversity in education. Positive educational trends include individualized education and legislation to provide parents with a wider choice of schools. (SAS) (SP 016 936)

3. Dede, Chris. "The Next Ten Years in Education." People's beliefs about the future are powerful in shaping their actions. The issue of what image of the next ten years is most appropriate for educators today can be examined metaphorically with differing visions of what education can become. By using a series of predictions and by consolidating forecasts from futures research, educators can imagine a set of likely developments in education's context over the next decade, including forecasts of economic, technological, demographic, cultural, and political change. Implications of these developments for educational equity and practice center on issues of educational finance, educational technology, disparity in educational settings, and retrenchment of traditional approaches to schooling. The responses educators can make to these forecasts of the future and the visions they evoke suggest that the 1980s may be a time of marked educational innovation, not for ideological reasons, but because of financial necessity. (Author/BMW) (ERIC Document Reproduction Service No. ED 185 433.)

51. Deloria, Vine Jr. "The 80s--Return to Traditions." Indians should determine Indian education policy: Local control, meaning the smallest communal unit, and freedom from outside interference would be the best thing for Indian education, but Federal policymakers must first realize that education, if it is to be relevant to American Indians, must return in both content and substance to Indian traditions. (SAS) (SP 016 944)

30. Dillon-Peterson, Elizabeth A. "Educational Concerns for the 1980s." Federal regulations and general public indifference toward teachers, among other problems, are crippling educational progress. National direction for education is needed to clarify what local schools should or should not be expected to do; to develop short- and long-range goals, creating a framework from which professionals can work; and to determine the degree of commitment individual citizens and the nation as a whole have to education. (SAS) (SP 016 966)

8. Farr, Roger. "Let's Build on the Strengths of our Comprehensive Public School System: A Recommendation to Educational Policy Makers." Specific, measurable progress has been made in education, but threatening trends could wipe it out. These trends--the back-to-basics movement, minimum competency testing, vouchering, and the tax revolt--all support each other,

and may cause detrimental effects on education if they should succeed. To offset potentially detrimental trends, the Federal government can establish a system, procedure, or apparatus to continually evaluate educational needs; can assess what the schools have accomplished and still need to accomplish; can encourage educational research and development on more effective methods and procedures; and can effectively disseminate information generated by public funds. (SAS) (SP 016 970)

41. Fasenmeyer, Sister Mary Sarah. "Learning and Authority." The decay in the quality of education is due to a breakdown in the authority schools have over students and educational processes. Emphasis must be placed on the school's power to determine minimum competencies through periodic evaluation, and, if necessary, to prescribe remedial education or grade repetition. Schools should have reading clinics for students who have difficulties attaining minimum reading skills. In addition to emphasis on reading, writing, speaking, and computing skills, the school should take care to inculcate in its students a sense of social and moral responsibility which, includes respect for life, property, and integrity. To facilitate moral education in public schools, however, new preservice and inservice programs must be developed. (RJG) (SP 016 960)

22. Ford, Sondra. "Redress the Educational System." A portrait of future North American society is painted, and the role of formal education is discussed. The importance of adaptability as a means to meet the needs of a changing society is stressed. Open education and an increased attention to cultural pluralism within the educational structure are encouraged, and a discussion of emerging sociocultural patterns as they relate to educational development is provided. (LH) (ERIC Document Reproduction Service No. ED 184 996.)

49. Gallagher, James J. "Can We Have Equality and Educational Excellence? A Proposal for Maximum Gain for Minimum Investment." Not nearly enough money is going into the identification and development of gifted and talented children. A strong belief in equal treatment and opportunity has been translated into special education efforts for children in crisis, but not for children with special gifts. The Federal role in helping gifted students has been tentative and minimal in comparison with concern for the handicapped. Budget and legislative decisions have been made not on the basis of what might be of ultimate benefit to society, but on what is the greatest immediate crisis. To develop programs for gifted students, key administrative leadership is needed. Established and competent elementary and secondary training programs can provide the base upon which an intensive inservice training program, especially training, and improved leadership are presented. (SAS) (SP 016 954)

21. Gappert, G. Michael. "The Educational Consequences of Post-Affluence." Three different aspects of the post-affluent age are largely concerned with economic, societal, and

technological issues. It is questionable whether the skills needed to cope in this era will be acquired within the schoolhouse and the classroom or outside the traditional delivery systems of education. New partnerships with external agencies, resources, and forces are evolving in education. The study and understanding of these relationships should become a priority for education and the general public. (SAS) (SP 016 934)

39. Glaser, Robert. "Trends and Research Questions in Research on Learning and Schooling." This paper concentrates on cognitive psychological research on school subjects using as illustration work in aptitude for learning, mathematics, and reading. The latter is characterized as: (1) comprehension as the construction of knowledge; (2) the structure of text; and (3) reading as the acquisition of a skill. In mathematics, research is largely centered on the polarity and tension between emphasis on learning procedural rules for solving problems, and emphasis on "meaningful" instruction and mathematical "understanding." Researchers on intelligence and aptitude are unhappy with the state of the art because: (1) Given present techniques, theoretical understanding of the abilities measured, and the usual forms of testing, we have reached a plateau of efficiency; (2) The tests provide minimal information--useful for selective decisions about entrance into a program, but not diagnostic enough to affect the conduct of instruction; and (3) Current test theory and technique have not made contact with new developments in the psychology of learning and cognition. (Author/RJG) (SP 016 956)

1. Goldhammer, Keith. "An Agenda for Education for the Next Generation." Extensive change in the current educational system is needed. The major problems are: (1) Children do not relate their school experience to life experience; (2) The basic purpose, format, and curriculum of schools have not changed fundamentally since medieval times; (3) Fragmented advocacy groups and no central educational organization representing all education have diminished leadership on all fronts. Proposed solutions include: (1) Increase the level of professional competence and the number of competent professionals; (2) Form a central policy-making organization for education; (3) Improve the knowledge base for educators; (4) Improve school/community/home relations; (5) Alter curriculum to emphasize life competencies; (6) Make education a lifelong experience; and (7) Restructure roles of teachers and administrators to help children adapt to modern society. (SAS) (SP 016 975)

54. Goodlad, John I. "Improving Elementary and Secondary Education in the 1980s." Schools need to be improved holistically and become vigorous community institutions. The local school must be the focus of the efforts of community action and parent and teacher support. There are several major problems that many schools must solve in their effort to improve the educational delivery systems in the 1980s. Outside of schools, various centers are needed to give full-time attention to

curriculum development. Several alternative approaches to curriculum development need to be employed simultaneously. Inequities, which result in the erosion of the common school, are sharply apparent in the differences in subject matter between upper and lower tracks of high school classes, and between vocational and academic programs of study. The range of activities used by teachers to motivate, involve, and stimulate students is limited at all levels of schooling. Few teacher education programs consistently produce graduates capable of handling the complexities that they confront in the classroom. (JN) (SP 016 959)

36. Goodman, Kenneth S. "Needed for the 80s: Schools That Start Where Learners Are." The rededication of schools to equal educational opportunity for all American children regardless of race, ethnic or socioeconoic background, and parental status does not stop at merely opening the doors to all schools. Actions such as busing are only the prerequisites to the curricular and methodological reforms necessary to provide a true educational affirmative action program. Equal educational opportunity is the right to grow, to expand, and to become more fully functional, and should be adapted to the student rather than adapting the student to the educational system. Several conservative practices that mainly help only middle class students should be abandoned, and teachers should once again work with students, parents, and the community in creating effective educational programs. (CMJ) (SP 016 962)

28. Hays, Donald G. "Education in the Suburbs: So Goes the Nation." Suburban migration has been seen as a means of improving one's standard of living; the high quality of education in suburbia was believed to be one way of achieving this improvement. However, it appears that the suburbanites' belief in the American dream and their dissatisfaction with the educational system is rampant. Declining enrollments, a changing student population, the influx of different values and cultures, and a lack of stability is causing turmoil in the suburban schools. The 1980s will see an increase in individuality that will force educators to find alternative approaches to provide for individual learning needs. Partnerships between parents and educators will be emphasized, as will accountability. Multimedia education will be commonplace. (Author/RLV) (ERIC Document Reproduction Service No. ED 183 695.)

37. Hensgen, Sister Caroleen. "The IEP: Problem or Solution?" To teach students to live their lives is to give them unlimited opportunities to be responsible for their actions and thoughts. The only way to meet each individual child's needs is through a program geared to the student as a unique individual. The Individual Educational Program (IEP) offers such a program through its required cooperation and collaboration between the student, parents, and teachers. The process for developing an IEP involves the definition of short- and long-term goals and the signing of an agreement by all parties involved. (CMJ)

(SP 016 980)

25. Hollis, Phoebe P. "The Student of the Future: A Profile." Rapid change, shifting values, and booming technology are existing societal dimensions having an effect on the student population. The nature of education needs to be changed because of technological advancements, declining enrollment, and changes in work attitudes. Educators must become aware of the speed of change and its drastic effects upon society. Educational leaders should be aware that today's actions and decisions determine the future of education, and that the student of the future will depend largely on the interplay among future political, economic, and social trends. (SAS) (SP 016 933)

5. Howe, Harold. "The Brown Decision, Pluralism, and the Schools in the 1980s." The greatest effect of Brown v. Topeka Board of Education is that it removed race as a factor in governmental decisions. Minority groups found greater solidarity and demanded their rights. This resulted in the myth of the melting pot being submerged by the myth of pluralism. Group identity can be mixed with society's ideals, that can then continue to support society. Two things must be kept in mind: schools do not control the forces that cause segregation, and minority opportunities will not improve simply by school desegregation. Recommended solutions include: linking housing policy with school desegregation, and development of housing and educational programs that make integration attractive. Educators will have to rely on themselves to make changes and to make integration work. (SAS) (SP 016 971)

42. Iozzi, Louis. "Education for the '80s--And Beyond the Socio-Scientific Reasoning Model." Research and theories by psychologists Jean Piaget, Lawrence Kohlberg, and Robert Selman on problem solving, decision making, moral development, and critical thinking skills are reviewed. These theories and research are combined with the author's into an original decision-making model. The socio-scientific model incorporates problem solving with the social and moral/ethical concerns of decision making. The major objective of the model is to aid educators as they develop educational materials that lead students to higher levels of thinking and reasoning. To apply the model, educators must identify learning experiences appropriate for students at different grade levels, with differing abilities and needs. Activities are suggested for various stages of the model including classroom dilemma discussion, critical analysis, and evaluation of data. (DB) (ERIC Document Reproduction Service No. ED 180 917.)

2. Jones, J.L. "Facing the Eighties: Elementary, Secondary, and Vocational Education Needs." Changes in the structure of education and more money are what education in the eighties will require. Specific issues include: (1) revitalization of compensatory programs; (2) preparation of students to function in a multilingual, multicultural world; (3) accountability of

educators at all levels; (4) full funding for exceptional student education; (5) construction needs for schools in the eighties; (6) revitalizing urban centers; and (7) realistic solutions to vocational education needs. Students need to learn how to live in the adult world rather than the academic world. The local, state, and Federal governments and professional educators must work together to improve the education children currently receive. (SAS) (SP 016 938)

20. Jordan, K. Forbis. "Challenges to Education in the 1980s." Issues concerning public and Federal interests in education will include the extent of education to be provided at public expense; the relative share of that fiscal burden to be borne by local, state, and Federal revenues; public funds for nonpublic schools; equal access to education for all students; national performance standards; declining rate of growth in resources; and competition for funds among various social science programs. The capacity of government to maintain a balanced perspective with regard to these issues may be the greatest challenge. (Author/DS) (SP 016 942)

53. Jordan, Killian. "Meeting the Challenge--Serving Migrant Children." The children of migrant farm workers have been deprived of public education chiefly because of disclaimers of repsonsibilirty made by local, state, and Federal bureaucracies. Migrant parent involvement in education programs is almost nonexistent due to a variety of factors: (1) The migrant faces an enormous disparity between the school setting and the home setting, and between school language and home language; (2) Migrant families are politically and culturally isolated from the rest of society and are frequently regarded with disdain; (3) Most migrant adults have little education, speak little or no English, and are afraid of teachers and administrators. Migrancy itself is the definitive cause behind the lack of special services for migrant children. Migrant farm workers must be informed about laws, about educational programs, about the importance of what their own and their children's participation in education can mean. (JN) (SP 016 957)

11. Kiernan, Owen B. "Issues for the 1980s." Education will face serious problems in the future: Adequate funding for schools and colleges will be a problem; a loss of public confidence in educational institutions has contributed to education's retreat from the public; forces of change in society, reflected in the schools, makes effective goal setting difficult; students are often not brought up to their potential prior to being sent out into society. These and other trends call for a reshaping of education, involving the triad of local function, state responsibility, and Federal concern. These levels of government must cooperate and accept their responsibilities if the status and quality of education are to improve. (CJ) (SP 016 932)

44. Lipsitz, Joan Sheff. "Intermediate Schooling: Decisions for the 1980s." Schooling for young adolescents (middle grade education) is the weakest link in the chain of public education. The central characteristic of this age group is its diversity, resulting from extreme variations in the rates of physical, social, emotional, and intellectual development. Strong administrative leadership and teachers specifically trained to teach adolescents do not exist at the middle school level as they do at the elementary and high school levels. Special attention needs to be given to curricula and counseling for adolescents. Schools should encourage diversity, insist upon excellence, guarantee basic skills without reducing curricula to reading and writing, and meet the needs of adolescents without comparing them against other age groups. (Author/JN) (SP 016 965)

27. Little, Dennis L. "Demographic Projections and Educational Policy Issues." Significant changes in various demographic patterns include a declining birth rate, regional shifts from the "Snow Belt" to the "Sun Belt" as well as a return to rural America, an increase in female labor force participation, a general change in family structure ("kids with kids," single parent families, unmarried couples, etc.), and changes in the racial and ethnic composition of the United States. Issues stemming from these population trends include: (1) making national policy fit different regions; (2) managing and developing school physical plants with uncertain information; (3) fewer clients but greater needs; and (4) fitting social science curriculum to social trends. (CMJ) (SP 016 934)

26. Morrison, Peter. "Beyond the Baby Boom: The Depopulation of America." Trends toward zero population growth, more elderly drawing Social Security, racial polarization, changing migratory habits, and two-paycheck families will cause problems in planning educational policy. If current patterns of fertility and migration continue, society may be very different in the future. Educational policymakers must improve their understanding of demographic analysis because reporting of demographic trends, including monitoring and analyzing what has changed and what these changes mean, can help prod public recognition and political action. (SAS) (SP 016 931) (Document not available from EDRS.)

12. National Committee for Citizens in Education. "An Imperative for Change: A Goal for the Next Five Years." The most serious problem affecting education is the poor opinion in which it is held by the public. The uncertain nature of the school's mission, fragmented leadership, and citizen isolation are among the reasons for negative reactions. A shared decision-making process with greater citizen involvement is imperative if schools are to regain public respect. Parents, citizens, and students must be included in the process as true partners with the professionals. There must also be a formal mechanism that provides genuine authority for the school council to make decisions affecting the school. School boards and

superintendents must delegate a significant portion of their perceived and real prerogatives to that council and devise carefully drawn, but not oppressive, limits to its authority. (SAS) (SP 016 979)

29. Parks, Gail Armstrong. "The Double Jeopardy of Rural Schools in the 1980s: Problems and Potential for Renewal." Rural education should be targeted as a national priority, as it affects urban and suburban populations with increasing directness. Policymakers, officials, and education researchers need to examine all existing programs, policies, regulations, and guidelines from the rural schools' point of view. Those elements that inhibit local initiative and collaboration, as well as those that penalize schools for being small or remote, should be refashioned. Any decisions that do not acknowledge rural isolation and subsequent difficulties in accessing information about programs and services should be changed. The vulnerability of rural areas to shortages and cutbacks should also be considered. (CMJ) (SP 016 958)

38. Perrone, Vito. "Reflections on Elementary and Secondary Education: A Prelude to the 1980s." Too much accountability, declining enrollment, and conservative decision making are hindering public education. Education should be deregulated and more generously funded, and it should make use of parent and community resources. Decision making for school district needs should take place at the local level, rather than at the state or Federal levels. Support is needed for bilingual, multicultural education, improved research, and the elimination of tracking. Assessment in general, and standardized testing in particular, need to be reevaluated. To provide effective education, institutions must once again respect children and young people, intensify resources for their development, and cooperate with their parents. (SAS) (SP 016 963)

18. Philips, A. Craig. "Selected Needs of Elementary/Secondary Education in the 1980s." Schools must strive to maintain a balanced curriculum in which students, including immigrants, acquire basic skills in communication, computation, citizenship, healthful living, the sciences, the arts, and vocational endeavors. Both teaching and school administration can be greatly improved with electronic technology. Financial reform will also be necessary, as funding will be restricted. Federal, state, and local funding efforts must be more coordinated. Allocation formulas must be adaptable by the local school. (SAS) (SP 016 974)

33. Pulliam, John D.; And Others. "Mass Media Values and the Future of Education." The paper focuses on the effects of mass media, especially television, on the educational process and outlines implications for the future. Studies point out that children view an average of 8,000 hours of television between ages three and five. Positive effects include increases in the vocabularies of young children, a better appreciation of

different cultural characteristics, a wider understanding of issues, and better concepts of geography. A major negative effect is that television does not encourage children to think or probe deeply. Negative role models and violence are also undesirable, and television makes formal education seem tedious and demanding. Most crucial is the power of media in supporting materialism, hedonism, and unchecked consumption of scarce resources. Therefore, action that could enhance future survival depends on public pressure on the media. The media as vehicles of social change influence appearance, language, family, politics, religion, and status. Educational implications are that an understanding of the world requires interdisciplinary scholarship, critical viewing, and new values; serious studies of the power of the mass media must be made; and educators should examine more extensive use of media in private and public education. The author cites passages from the works of Marshall McLuhan and John McHale ("The Future of the Future"). (Author/KC) (ERIC Document Reproduction Service No. ED 180 901.)

4. Porter, John W. "Elementary, Secondary, and Vocational Education Needs for the 1980s." Achieving equality and quality in schooling is the greatest educational need of the 1980s. Three state and Federal actions are necessary: an acknowledgment of the direct connection between education and employment; a specification of performance levels by high school students in life competencies; and a means to relate funding to reasonable levels of basic skills performance. National policy should link employment skills acquired in school to job opportunities. Federal legislation should provide a system to plan for each individual student and guarantee employment as a last resort. States should have elementary schools link student expectations, texts, tests, and report cards together and provide money to upgrade staff. High schools should assess students' skills in the tenth grade, band together to provide different employment options for students, and link themselves, the job market, and placement together. (SAS) (SP 016 940)

17. Salmon, Paul B. "Small School Districts' Concerns for the '80s." Though small school districts are a majority in the United States, they have been overshadowed by the needs and standards applied to the larger schools. Problems specific to small districts include lack of resources and financial strength, narrower range of program offerings, educational equity, and lack of evaluation standards that consider the differences between large and small school districts. Among advantages in small school districts are greater community and student involvement and better student, teacher, and parent relationships. Because small school districts have a profound effect on local communities, their contributions should be valued and supported through equality of resources and programs, recognition of accomplishments, and understanding. (SAS) (SP 016 976)

47. Sanders, Martha Dell. "Educational Opportunities for the Night People, the Drop-Ins, the Young Adults, the Diaper Crowd, the Mid-Lifers." A case is presented for operating schools twenty-four hours a day, which will provide benefits for drop-ins, adults, infants, parents, and students. With technology, every person can be provided the kind of education best for individual needs. All should have the opportunities, at any age, provided by schools: (1) counseling; (2) exploration; (3) problem solving analysis; and (4) individualized programs for retraining or recycling for new types of jobs. The present elementary and secondary linear model is an excellent foundation on which to base the expansion of universal education. (SAS) (SP 015 961)

16. Sher, Jonathan P. "Rocky Too: The Challenges of Rural Education in the 1980s." Rural education in the U.S. proper and the world is finally gaining the attention it has been denied for so long. A study of rural education conducted by the Organization for Economic Cooperation and Development details the state of worldwide rural education in a fifteen point outline, with emphasis on finance, government, research, educational needs, equal education, teacher education, educational reform, school community relationships, student achievement, and governmental assistance. (SAS) (SP 016 941)

13. Stake, Robert E. "Quality of Education and the Diminution of Local Control in Schools in the United States." Many readers will agree that the conditions in schools need improvement, that problems in schools are closely linked with the problems in society, and that local control has diminished. The latter has contributed substantially to the problems. Uniform standards and minimum performance criteria have been tried but the results are dismal. It is recommended that government exercise less direct responsibility and be more supportive without specifying improvements. (Author/MLF) (ERIC Document Reproduction Service No. ED 182 848.)

46. Sullivan, Peggy. "Libraries, Information, Freedom and Children." As life becomes more complex and knowledge more necessary for even the simplest kind of life, young people must have access to and knowledge of the tools that will enable them to function in an information society. Libraries, as purveyors of that information, need support, critical evaluation, and dedicated, committed staff. The educational role of a library involves not only the provision of information, but also instructional programs teaching young people to be self-sufficient in obtaining, interpreting, and using that information. (CMJ) (SP 016 945)

50. Tonemah, Stuart A. "Indian Education in the 1980s." The needs of American Indian education are many and complex. Basic education should to be expanded into areas such as gifted and talented, computer education, handicapped education, more diverse vocational programs, adult education, and directed research and

dissemination. Efforts should be made to accredit Indian studies programs, establish a "culturally sensitive site" for Indian scholars, and develop programs to maintain the languages and cultures of the tribal people. Federally funded Indian education programs need to move toward service programs rather than pilot projects, and better coordinate tribal, local, state, and Federal funds to meet educational needs. Any future legislation must reiterate the responsibility of the Federal government to the Indians. (CMJ) (SP 016 944)

6. Tyler, Ralph W. "The Needs of Elementary and Secondary Education for the 1980s." Pressing needs of elementary and secondary education for the 1980s are likely to be in four areas. Federal assistance will still be necessary to furnish real educational opportunity for disadvantaged children. Federal encouragement and support is needed to reverse the neglect of citizenship education. The transition of children and youth into constructive and responsible adults needs to be much smoother and the Federal government can help localities to act in this regard. Finally, the serious erosion of out-of-school educational opportunities can be stopped and the educational system rebuilt with strong encouragement and support from the Federal government. (Author) (SP 016 953)

7. Warner, Richard W., Jr. "Decision-Making and the Schools in the 1980s." The modern school system has become overloaded with expectations, many of which simply cannot be met. A large part of the problem is that programs are instituted without planning, thought, or evaluation, and concepts like career education are taught separately instead of being integrated into other subjects. Three basic problems need addressing: coping with change in society, goal setting, and systematic planning and evaluating. Although an examination of the present educational system may mean that many responsibilities assigned to and expected of schools will be assigned elsewhere, the educational system must continue to develop the means for helping individuals deal with an ever-changing and uncertain world. (SAS) (SP 016 969)

23. Wegmann, Robert G. "Educational Challenges of the 1980s." Education will have to face fewer students and less money in the next decade. The white middle class migration to the suburbs will cause greater concentrations of minority students in the large cities, intensifying the problems caused by non-English speaking students and increasingly isolated socioeconomic environment. Projections for enrollments in higher education are more difficult to obtain because of foreign students, part-time students, and the state of the economy. The school curriculum will need to adapt to technological innovations, and the ability to use computers may even become a new aspect of literacy. Emphasis will shift toward lifelong learning, possibly with more alternating periods of work, leisure, and learning. (RJG) (SP 016 937)

34. Wigginton, Eliot. "Introduction--Foxfire 6." Principles that help to improve learning and schooling are: (1) Every detail in the physical environment of a school, no matter how small, matters and contributes in a cumulative way to the overall tone. (2) Students should be allowed to make and carry out educational decisions that they can handle. (3) All courses, to the fullest extent possible, should be experiential. (4) The school and community should cooperate to the fullest extent possible. (5) The school atmosphere should be exciting and interesting. Although public schools currently are less than perfect learning environments, exciting and creative environments can be nourished so that genuine learning does take place. With sensitive leadership, these environments can spread within the system to infect the whole and to embrace the surrounding communities. (SAS) (SP 016 949)